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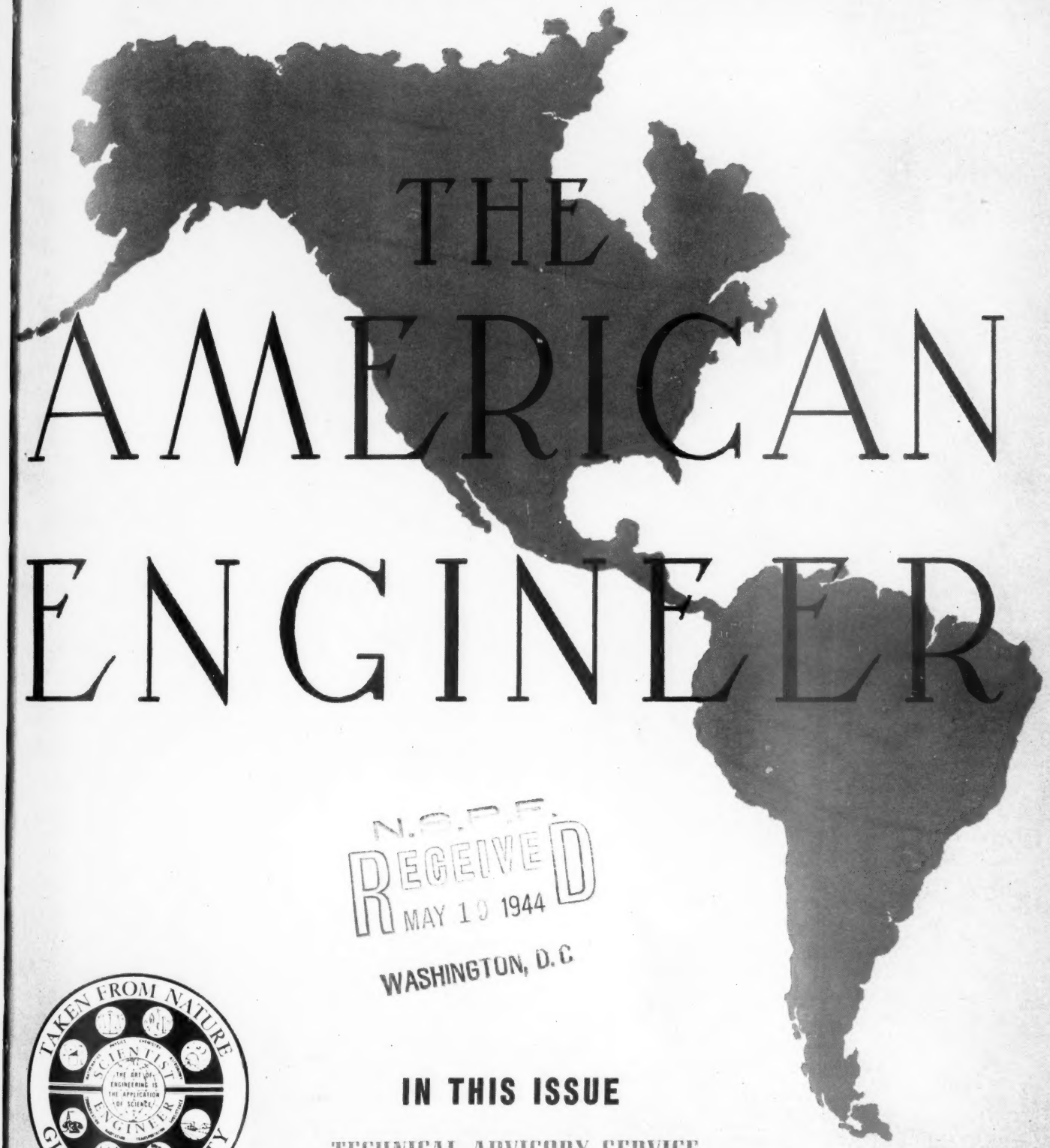

THE AMERICAN ENGINEER

N.S.P.E.
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IN THIS ISSUE

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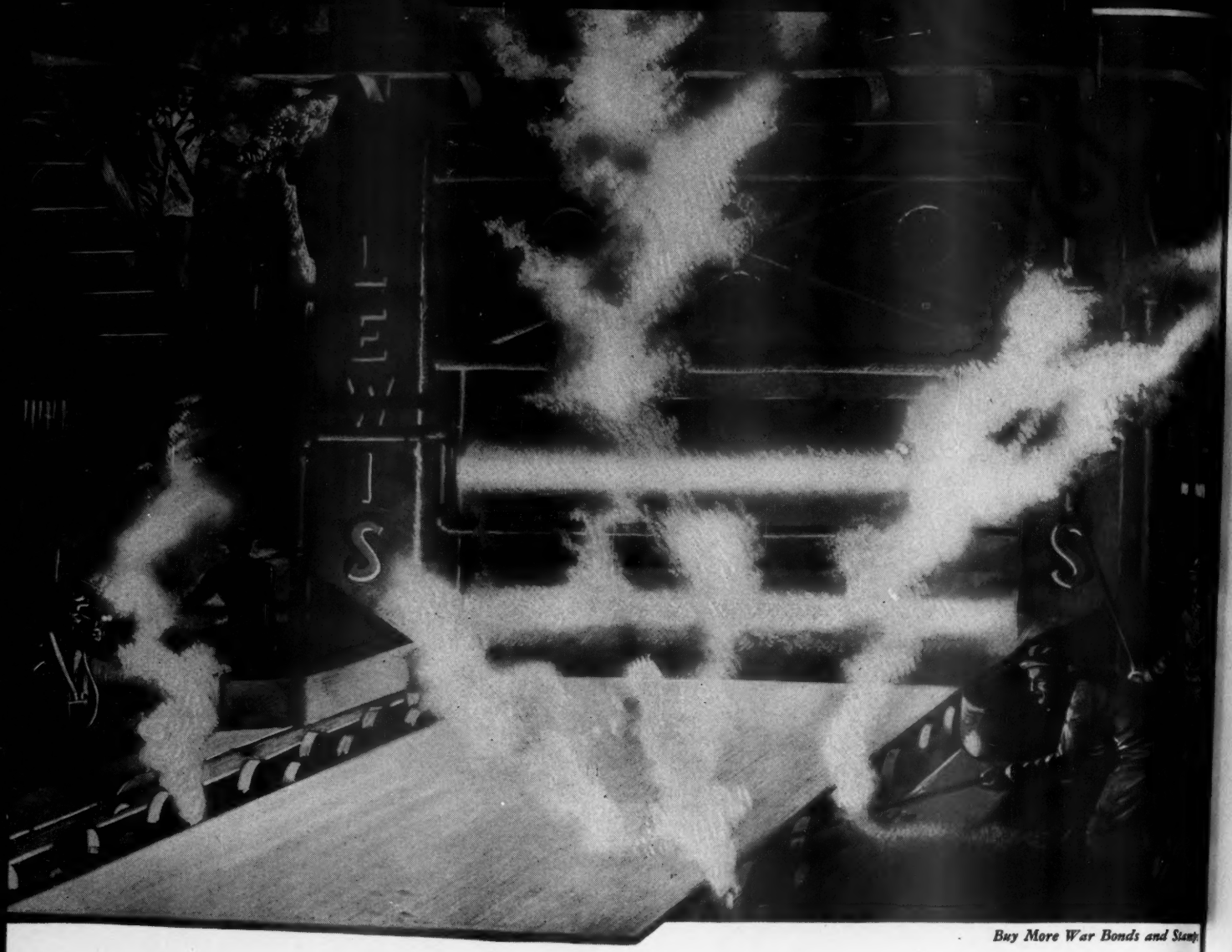

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THE

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The American Engineer

REVIEWS ITS PAST TWO YEARS

Finds Much To Be Desired

What Material Do Readers Prefer?

Consensus As Registered With Editor

Invites Comment

More than two years have elapsed since the National Society of Professional Engineers entered into its present contract with the National Industrial Publishing Company for the printing and distributing of the American Engineer. Paralleled by and subject to, the vicissitudes of war the publication has encountered obstacles difficult to surmount. Advertising, editorial and news features, appearance, format and other essential phases have not progressed as anticipated. Printing is unsatisfactory, mailing is delayed, editorial assistance is non-existent and collaboration, with few exceptions, sadly lacking. The Editor is only too well aware of the shortcomings of the publication. Would that it were possible to present a detailed picture of the task of preparing a monthly bulletin sans practically everything required to publish a magazine worthy of a National Professional Society. The lack of funds for improving appearance must be appealed for. Unhappily, relatively few momentary possibilities for selection and expansion. With the ending of the war, definite steps must be taken to overcome these limitations.

Despite the conditions above referred to the expressed opinions of subscribers have, generally speaking, been suggestive of understanding and on the whole favorable. Perhaps there is much unfavorable comment that does not reach the Editor. On the other hand there is far more both favorable and unfavorable, that does come to his attention than one, unused to the role, would be inclined to believe.

The correspondence which reaches the desk of the Editor has grown to such proportions that it requires daily attention to prevent accumulation too great to overcome. Thousands of communications must be perused in the course of a year. Many which may expect response cannot be acknowledged because of lack of time and facilities. Forebearance must be appealed for. Unhappily relatively few pieces of mail contain usable editorial copy. Submissions are often unsuitable for publication. Sometimes they are technical and scientific papers rather than material dealing with engineering as a whole or with the professional, social or economic aspects of the calling and its relation to, or effect upon, society. Often they are so badly expressed, or manifest so little regard for the basic rules of English composition, that it is beyond the role of an editor to rewrite the intent of the author; furthermore policy prevents more than minor editorial change of any material ascribed to another. Frequently submissions are too personal and if published would serve to advertise the individual or his work in a field of practice. Advertising or publicizing any individual, other than for his contributions to the professional engineering movement, is contrary to the fundamental principles of the National Society as well as those of the American Engineer. Most readers appreciate how dangerous it would be to permit a publication dedicated to a cause to be used as a vehicle for personal or selfish purposes. Policy and judgment also suggest the propriety of seeking material from diversified sources and locations and of not stressing sources or locations other than for purposes of stimulus and interest. These and many other thoughts might be elaborated on if space permitted.

It is interesting to note the reactions of readers, to the extent that the same can be ascertained. What kind of publication and what type of editorial matter meets with most approval, criticism and comment? Based on expressed approvals, commendations, criticisms, requests for additional copies, inquiries concerning reprinting, number of correspondents and recommendations the following appears to be a consensus of readers.

The best issues from the standpoint of editorial content have been, in order:

1. The April-May Number 1942
   (Apparently there is no close second in this case)
2. The November-December Number 1942
3. The May Number 1943
4. The January Number 1944
5. The July Number 1943

The best issues from the standpoint of make-up and appearance have been, in order:

1. The November-December Number 1942
2. The January-February Number 1943
3. The July Number 1943
4. The August Number 1943
5. The November Number 1943

The Contributions most approved or appreciated have been, in order:

1. Man and His World—March-April 1942
2. The Engineering Organization of Society—November-December 1942 January-February . 1943
3. Our Professional Engineering Society — August 1943
4. Wages and Hour Law Report—March . . . 1944
5. The Machine—Its Effect on Society—August . 1943

The Items arousing most interest, comment or controversy have been, in order:

1. A Challenge Met—March 1944
   (The comments, inquiries and criticisms regarding this article have been in excess of those received on anything published to date. Presented merely to afford readers an opportunity to smile, this story apparently arched many eyebrows and aroused considerable curiosity. Few transposed the letters of the author's name).
2. Suggested Forms of Engineer's Oath—December 1942
3. Engineers-In-Training—June 1943
4. The Ohio Society of Professional Engrs.—May 1943
5. Super-Organizing Engineers—November . . . 1943

The above listings are not those of the Editor nor do they represent his opinions. They are simply tabulations based on the premises noted. However, they perhaps serve to indicate the personal opinions of a cross section of the membership. It might be interesting to compare them with your own if you have time. Comments serve to guide editorial endeavors. Have you any?

TECHNICAL ADVISORY SERVICE

A PROPOSAL TO PROVIDE THE CONGRESS

WITH A CORPS OF EXPERTS

SUFFICIENT IN QUANTITY AND QUALITY

FOR THE RESEARCH, INVESTIGATION, AND COLLECTION OF DATA

ESSENTIAL TO INTELLIGENT CONSIDERATION

Of Legislation Involving Science And Technology

BY COL. WALTER L. SIMPSON

COL. WALTER L. SIMPSON
Past President—N.S.P.E.

NOTE: *The proposal herein set forth by the author who is the immediate Past President of the National Society of Professional Engineers is an interesting one applicable not only to the Congress but to the several states and larger municipalities For the past two decades large industrial organizations have maintained technical staffs for purposes of research and development. By so doing industry has pointed the way in scientific and technological advances. Governmental agencies have lagged because public officials have placed immediate finances above the need for constant research and planning as essential to progress and the public welfare.*

After many years of observing the Congress in action, first while stationed in Washington as an officer of the Armed Services, and later as an administrative officer in the civil services of the Government, I have concluded that many of the difficulties arising from Acts of Congress are due to a large extent to the fact that complete unbiased factual information is not available to the members of Congress prior to the enactment of any particular bill.

This is especially true of bills authorizing new agencies and appropriations. The groups interested in establishing new agencies and the agencies and departments asking for appropriations are naturally biased in their respective requests and are therefore enthusiastic to the extent that they mislead the Congress, often unintentionally.

Civilization in general has become so complex in the last hundred years that we are all dependent upon the sciences and the technological interpretation of the sciences for daily living. Further, the business of putting these technological developments to use has become more and more complex. The Congress of the United States is undoubtedly the largest business organization in the world concerned with the common good, since legislative acts that it passes affect every human being within the jurisdiction of the United States, and the financing of the entire Federal government rests with the Congress. It is not surprising therefore, that the business of being a Congressman has become a complex duty.

Men and women from all walks of life and with various business and professional backgrounds compose the Congress, and some are experts in a particular technical field. However, a member who is a specialist may not be a member of the Committee considering legislation in his field, or if by chance he is on such a Committee, it is doubtful whether he has the time to make a detailed study of the problem under consideration.

It is therefore proposed that the Congress jointly, or that each Body separately, set up a technical advisory group composed of licensed professional engineers proficient in the several phases of engineering, and such other experts proficient in the several phases of corporate business. This group headed by a chief, would be paid by and responsible to, the Congress or to the particular Body of Congress employing it. Selection of personnel should be based entirely on knowledge of a particular field and enough subprofessional and clerical help should be furnished to enable them to produce the volume of work necessary to keep pace with the Congress.

The duties of this group would be to investigate all matters referred to it by the proper authorities and to prepare an analysis of each proposal based on facts as presented and on such additional facts as are pertinent but may have been inadvertently or deliberately omitted. This report would be a compilation of essential facts that would give Committee members an intelligent basis for their decisions.

Further, since many legislative acts originate in the Congress itself, the group would serve as a research body for such members as would request their assistance.

No large business would be without such a service even though some of the officers were technical experts, and the total business of the Government far exceeds that of any individual business and covers the entire range of subjects necessary to carry on our complex system of living.

It is apparent that the Congress is going to be called upon to produce some highly technical legislation prior to

(*Continued on Page* 24)

ESTABLISHING PROFESSIONAL STATUS

THE VALUE OF LICENSE LEGISLATION

EVIDENCED BY RECOGNITION TO LAW AND MEDICINE

ACCORDED BY COMMON CONSENT

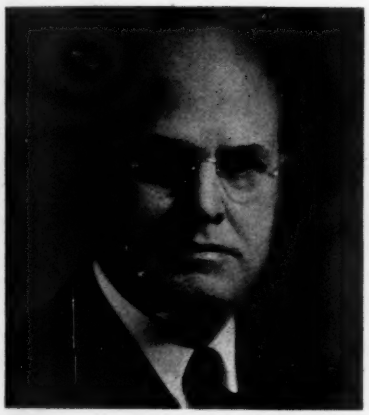
COURTS, ADMINISTRATIVE BOARDS AND PUBLIC

CANNOT BE EXPECTED TO ACCEPT PERSONAL EVALUATION

When Life and Property Are At Stake

(Kansas Sunflower Case An Example)

BY WALTER H. WHEELER



WALTER H. WHEELER
Director N.S.P.E.

Walter H. Wheeler, National Director from the State of Minnesota, sets forth the case for Licensing and suggests that only through this medium can engineering hope to parallel Law and Medicine in establishing recognized professional status. Only Engineering Societies restricted to licensed practitioners can be compared to the Bar and Medical Associations of the country. Special reference is made to the Kansas Sunflower Plant where the group that sought professional recognition had, in the opinion of others, no more claim to such status than did the union.

The writer did not believe in license laws in years gone by but, nevertheless, was Number 70 to register in his own state. He recognizes now that the Engineers' Registration or License Laws, (Montana and New Hampshire are the only states that do not have them) are the foundation of the profession. He takes off his hat to those men who were far sighted enough to see that to and sell the idea to the rest of us.

Some license laws are not yet what they should be, and the enforcement of them is a long way from satisfactory, but we are making progress. Primarily the Engineers' Registration Law has the same purpose and the same objective in its field as do the license laws for lawyers, doctors and dentists, namely, to protect the public against malpractice and incompetence. It goes further than that. It draws a line of distinction between the professional man and the pre-professional and non-professional. This is a distinction which courts of law recognize and which quasi-judicial boards are also bound to recognize. In fact it is the only definite way in which this distinction can be made legally. There are today in the United States 72,000 registered professional engineers. These men, in the eyes of the law, are the engineering profession.

It took engineers a long time to realize that they could never successfully establish professional status under the law and in the eyes of the public until they went about it in a legal way. It has taken them another 20 years to realize that they could not establish a real professional society unless it was founded on the fundamental principle of legal qualification for membership. That is the firm basis on which the National Society is established. The writer ventures to predict that it will rank with the American Medical Association and the American Bar Association in representing its members and the profession. Let me repeat: 1st. To be recognized as a profession engineering must have legal status. 2nd. Legal status has been given by state registration laws. 3rd. A true professional society must be composed exclusively of legally qualified members. Such is the status of the Medical Association, of the Bar Association, and of the several State Societies of Professional Engineers.

Engineers are accused by some of being over-organized. Maybe, but we are going through a period of transition, growth and orientation. Such periods are bound to be accompanied by more or less confusion, lost motion and overlapping. This is nothing to worry about. The real worry comes when we are static. That is what we were until the professional movement got under way. We are presently in the middle of a very critical period for the profession. We were late in getting started. We are face to face with the problem of whether we shall remain a profession or become a trade. There is no middle ground. In the eyes of the law and in the eyes of quasi-judicial bodies, such as the National Labor Relations Board, we are either a profession or we are not. That was the fundamental cause of the trouble at the Sunflower Ordnance Plant in Kansas, which has had repercussions throughout the engineering world. There were and there still are many men practicing whose thinking is back in the horse and buggy days. They think that all they have to do to be recognized as professional engineers is to say that they are, or have some engineering society say that they are, and presto, they are. However, when they went up against a panel that was functioning in accordance with law, and perhaps a little in accordance with its own interpretation of law,

they received a severe shock. The panel did not accept their statement that they were professional engineers or in any manner different from the technicians who, they said, were not professional engineers.

What one wishes to drive home is the fact that it is important to everyone of us that engineering be preserved as a profession. It is important that we keep it from becoming a trade. Everyone who is eligible to register should do so at once. It is not an overstatement to say that our future national welfare depends to a considerable degree on the maintenance of engineering as a profession. What do you think has kept it alive and made it go forward to achieve the great things which it has accomplished? Was it the monetary gain, the wages that were being paid? They are necessary of course but it was not wages that the great men of our profession have striven for. Rather it was service to mankind; it was fame; it was the desire for public recognition which drove them and inspired them to sacrifice personal comfort and even health and life to accomplish their tasks. That is the professional spirit. The trade unions have wholly different standards, and, one says that with all due respect to the trade unions and their members. They have their place in the scheme of things, but it is not that of the professions. Nor can it ever be the same, except in one respect, viz. promotion of the temporal welfare of members. In this one respect we do have some common aims, bue we have widely different approaches to the problem. The instant we adopt the approach of the trade union, we cease to be a profession because we *cannot* adopt it without sacrificing high aims and purposes, codes of ethics and fair practices.

Yes, our approach is different. It is the approach of reason, justice, and agreement by common consent. We set up fair standards of classification and fair standards of compensation for such classification after due and careful consideration. We publish them as standards and support them with sound argument and facts. We ask that they be considered in the same spirit in which they have been presented and if found reasonable that they be adopted. Suppose they are not. Are we as professional men going on strike to enforce our demands? Not if we expect to retain our position as a profession in the minds of the public. Are we as a profession going to adopt collective bargaining under the Wagner Act? If we do, we shall have to use the methods that are used in collective bargaining or our efforts are likely to be ineffectual. It seems to me that a line of distinction exists and that it is a very definite line. We have helped to put it there, and it remains with us to keep it there or surrender our professional standing. We believe that it is our duty to ourselves and to the nation to see to it that the Wagner Act is amended to whatever extent may be necessary to exclude professional people from its operation and to clearly define our own profession in a way that has legal standing.

To make clear the importance of legal standing for a profession I call your attention to a recent decision of a Labor Board in Minnesota, which held that the gentlemen who cut your hair form a profession. They are licensed under the law for the protection of the public. On the other hand at the Sunflower Ordnance Plant, the application of certain engineers to be recognized as possessing professional status was rejected. They could not furnish a legal evidence which the panel could accept. This case has been rather fully discussed in the engineering press, therefore, I will not take time to go into it here. There are, however, two points which one should mention:—1st—So far as the writer knows the Kansas case has not been finally decided by the National Labor Relations Board. It may reverse the panel. 2nd—The National Society of Professional Engineers has a status which we believe would have stood up had it been applicable.

One of the problems which has worried all engineering societies has been how to provide for the young engineering graduates and have them started off in the right direction. This problem has become more serious because of the necessity to distinguish between professions and trades. The technical societies have tried to meet it by establishing junior memberships. In a professional society founded on the legal concept, junior memberships are not possible. The medics have their internship, and they also have at least a six-year course as a requirement, which we do not have. The engineer-in-training provision in the law is intended to fullfil something of the same purpose as the medic's interneship. It provides that the graduate of an accredited engineering school can immediately on graduation take his technical examination for preliminary registration. If he passes this examination he enters the status, under the law, of an engineer-in-training (interne if you please). He then proceeds to acquire his practical experience under the guidance of the profession, and when he has completed the required training period may take his examination on the practical application of his education. If he passes, he is then given his license to practice as a professional engineer. The National Society has urged all state societies to at once complete classification and salary schedules for engineering employees, and to publish them and get them adopted in their respective states.

These are but a few of the many, many problems which professional engineers must face and solve for themselves. George isn't going to do it for us. We must do it or it will not be done, at least not in the way that we want it done. Our National Society has set up a budget of $30,000. for 1944, and every dollar that is spent will be spent for the advancement of the Engineering Profession as a whole. Of course, we must always keep in mind that whatever we do must be in the public interest, and that our own best interest parallels the public interest. We believe that for the first-time, Engineering is on its way, with real legal professional status. The National Society of Professional Engineers is the only engineering society in existence that meets these specifications. It does not usurp any of the prerogatives of the technical societies. The technical societies have tried to function as professional societies and have failed. It behooves them to realize their limitations, be what they are supposed to be and get behind this sound professional movement and give it wholehearted support.

WHAT DO YOU THINK

OR HAVE YOU GIVEN THOUGHT

CONCERNING TRENDS AMONG ENGINEERS

THE PROFESSION MUST TAKE STEPS

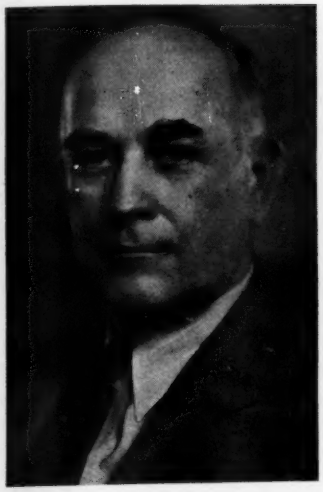
TO PREVENT LOSS OF STATUS

INDISCRIMINATE USE OF TERM ENGINEER

Threatens Disintegration

An Awakened Engineering Consciousness Called For

BY J. E. WICKSTROM



J. E. WICKSTROM
Director N.S.P.E.

In this dissertation the writer discusses the abuse of the term engineer and appeals for measures to protect the profession. His arguments are of course more applicable in certain sections of the country than others. It should be borne in mind that in some states there is today little tendency to usurp the title and use of the designation Professional Engineer and the practice of professional engineering under any other designation brings prompt action by state professional bodies. The existence of strong, active state societies of professional engineers is the most effective means of enacting good laws and enforcing the same.

Each of us should give thought to the pungent remark of Robert Burns — "Oh, wad some power the Giftie gie us to see oursel's as ithers see us." So—, let us consider the engineering profession.

Current publications indicate approximately 72,000 Registered Professional Engineers in the several states, and at least twice that number who are practicing some phase of the profession of engineering without a license. To these are entrusted public safety and health, not to mention plans for spending the taxpayers' money. Thus, the engineer as a class becomes important in our economic structure, as well as a vital factor in our National welfare and standing.

In the interest of public safety and health, faint stirrings of our national thought have brought about the enactment of laws in States, limiting the practice of engineering and use of the title "Professional Engineer" to those fully qualified on examination by their peers. This, coupled with the phenomenal advancement of our nation, due largely to scientific engineering research and development, has attracted the public mind to the Engineer and has developed an inferiority-complex which appears able to satisfy itself only by arrogating the title of engineer to the individual wherever possible. Unfortunately, this appears to stem from loose (or lack of) thinking on the part of our Public Administrative officials — National, State, County and City — and our institutions of higher education. In recent issues of popular periodicals there appears an advertisement by a large insurance company, offering — "honesty engineering"—as a term for its fidelity bond. We also find cleaning establishments represented by a "pants pressing engineer", air raid wardens classified "decontamination engineers", and widespread misuse of the engineer designation just as ridiculous. These uses of the name "engineer" apparently stem from the small-boy attempt — with tin-star or wooden sword — to emulate his hero, and is evidenced in adult life by self-appropriation of some engineer-designation and thereby basking in the reflected esteem of a great and honored profession. In some states where strong professional societies prevail this condition is being rapidly corrected. In other instances, however, where no state professional society exists or one functions poorly the situation referred to is prevalent.

Manifestly, a political office holder, in making an appointment, will attach the most attractive appellation at his command, and the various designations of engineers lend themselves well to this purpose and raise no disturbances in the public mind. Thus have been created a vast number of "engineer" designations for purely workman and operator jobs among those who are neither qualified nor competent to be designated "Engineer". This practice is developing a Frankenstein which will disorganize the fundamental soundness of the engineering determinations upon which our advancement as a Nation has depended. Unless we return to the proper use of the title "Engineer", limited to those engaged in scientific work, and forbid the designation to all others, we must coin a new name for the real Engineer. Imagine surgery being practiced by a meat-cutter from a butcher shop, or the compounding of prescriptions by a cosmetic clerk, etc. It is equally absurd to expect competent civil engineering from an instrument man, electrical engineering from a wireman, mechanical engineering from a machinist, or structural engineering from a carpenter; yet, we find this intimation today in public projects because of the improper use of the designation "engineer". Left unchecked, the prevalent tendency to apply an engineer-designation to any and all occupations can only result in destruction of public confidence in the

(*Continued on Page* 24)

THE LAWYER AND THE ENGINEER

COLLABORATION IN FEDERAL CONDEMNATION PROCEEDINGS

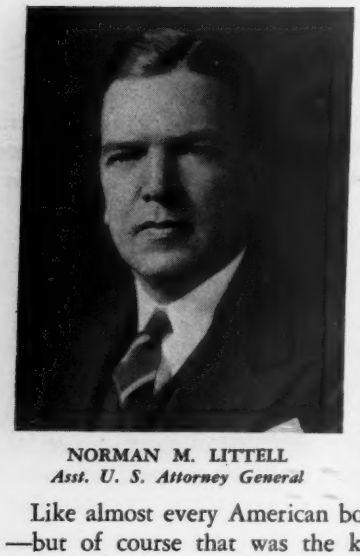
SUGGESTS THAT MUTUAL APPRECIATION OF RESPECTIVE ROLES

WILL AID IN PROMOTING PUBLIC WELFARE

BOTH PROFESSIONS ARE ESSENTIAL TO PROJECTS

INVOLVING THE ACQUISITION AND USE OF PROPERTY

BY HON. NORMAN M. LITTELL



NORMAN M. LITTELL
Asst. U. S. Attorney General

In a recent address delivered to the District of Columbia Society of Professional Engineers, Asst. Attorney General Littell, of the Department of Justice, as head of the Land Division discussed some of the collaborative efforts of Lawyers and Engineers in proceedings incident to the acquisition of property for federal use. Editorial policy necessitated deletion of some details. For copies of the complete address interested persons are invited to address Herman F. Lame, President of the District of Columbia Society. (*see Roster, Page* 4).

Like almost every American boy, I idolized the engineer —but of course that was the kind of an engineer who leaned out of a window of a big locomotive, with his hand on the throttle, while I stood spellbound watching the train go by. Most certainly I was going to be an engineer—perhaps another "Casey Jones". It took years to graduate from this conception to a mature view of the engineering profession, working my way through many popular misconceptions ranging from the engineer promoter of water districts, irrigation systems and gold mines, who lends dignity and assurance to a prospectus by the simple expedient of affixing the word "Engineer" beneath his signature, to "sanitary engineer", "household engineer" and even "creamery engineer". You know the types. There have been no laws to prevent abuse of the word "engineer" except as associations such as yours have urged them.

It was a very long step indeed, and perhaps typical of American thinking on this subject, to reach my present concept and profound appreciation of that body of highly trained professional engineers who, in the trial of condemnation cases conducted by the Department of Justice, carve their way into the most complex questions of law and fact to find the truth of the matter, let the chips fall where they may.

As head of the Lands Division of the Department of Justice, charged with conducting 7,300 condemnation cases embracing over 75,000 separate and distinct tracts of land in the United States and in the territories, with every conceivable type of improvement located thereon, from airports to industrial plants, factories and shipyards—all demanding valuation for the sake of determining just compensation payable to the property owner, I have acquired a profound respect for the inevitable partnership of the lawyer and the professional engineer. I confess that just as some humorist has said of women "We can't get along with them, but we can't get along without them", the professional engineer has sometimes seemed equally trying. In not bending his views to meet what seemed proper theories of valuation he sometimes seems like a very stubborn fellow indeed, but when we come to understand each other better in the rough and tumble of lawsuits, the truth does emerge, and the truth is satisfactory.

Let me confess at once to a conviction of long standing. Contrary to the popular conception, the lawyer in condemnation trials is not the most important factor; the witnesses are. The lawyer at best merely arranges the order of witnesses and turns on and off the flow of the witnesses' knowledge. There is great art and skill in the manner of his doing so, but in the long run it is the testimony of the witnesses which is believed or disbelieved by the court and jury, and which produces the verdict and the judgment. The acid test is cross examination where both the mettle and knowledge of the witness is tried out by a hostile attorney seeking out every flaw or weakness.

II. *Land Acquisitions for the War Effort*

Before looking forward to our mutual burdens in many lawsuits, let us briefly glance backwards at the greatest period of land acquisition work in the history of this or any other Government. The period immediately behind us, since Pearl Harbor, is one of extraordinary production, not only of the greatest army of trained men, but of the greatest mass production of war machinery and equipment which any democracy has ever attained to on short notice. The war effort was literally based upon property acquisitions, demands for which rattled out of the general staffs with the rapidity of machine gun fire, including airfields, bombing ranges, tank maneuver grounds, artillery, machine gun and rifle ranges, housing sites, drydocks, naval bases, manufacturing plants for the production of guns, tanks and all the vast miscellany of modern warfare.

In the 5½ years from July 1, 1938 down to December 31, 1943 there have been acquired, inclusive of acquisitions now pending, 9,202,564 acres and 15,157 parcels not

measured in acres. Either title or the right of possession has been gained in almost all of these cases through condemnation proceedings. The real estate sections of the War and Navy Departments, Maritime Commission, Housing Authority, Defense Plant Corporation, Federal Works and other agencies of the Government operated at high speed to prepare necessary preliminary data—descriptions, title evidence, preliminary appraisals. Sometimes we received merely perimeter descriptions of the areas to be enclosed in camp sites lacking legal descriptions for thousands of tracts. Camp Murphy, Florida, embracing approximately 11,200 acres was acquired with no other description than an attached road map.

The primary objective was to get the military agencies of the Government into possession quickly so that the training and production program could go forward immediately. This objective was completely attained. By the quarter in which Pearl Harbor occurred sites were being acquired any place in the continental United States, its territories and insular possessions, in less than 5 days, counting from the hour and moment of the day when the request for an acquisition was received in the Department of Justice Lands Division to the moment when title or the right of immediate possession vested by court order. Immediate possession was attained last year in the average time of 4 days, 5 hours and 22 minutes. Small wonder that there was such night and day work in the Lands Division, with the stenographic staff staggered in two shifts until midnight so that no lawyer would ever be without secretarial help. The rule was to dispatch all requests for acquisitions within the same 24 hours in which they were received if it were possible to do so. In the field, United States Attorneys and Special Attorneys instituted proceedings immediately. Approximately 2 million pieces of mail were received and disposed of in 1943 alone in the Lands Division of the Department of Justice.

It would be impossible to give too much credit to the professional engineer, whether in the armed services of the United States or in civilian life, particularly the United States Army Engineer Corps and the Bureau of Yards and Docks of the Navy Department, for their contributions in the rapid fire acquisitions of these properties for the war effort. Short cuts, which are usually so offensive to the orderly mind of the professional engineer, had to be devised. Construction engineers were on the sites and at work frequently before the surveying of the innumerable privately-owned tracts could be completed to determine acreage and property boundaries as a basis for paying just compensation.

One of the great contributions of this period was the use of aerial photography in lieu of time-consuming and expensive surveying. 75,000 acres embraced in Pine Camp, New York, were photographed in three hours from the air, at an elevation of 2000 feet, and when projected at 600 feet to the inch, was built into a mosaic upon which 75 per cent of the tracts could be identified without surveying by reference to roads, property lines and natural landmarks. ****Other large camp-sites were similarly photographed, mosaiced and platted, leaving a minimum of surveying, so that title and valuation evidence could be more rapidly secured and property owners more quickly paid.

III. *Determining Just Compensation for Property Owners*

Many millions of dollars are now in issue in condemnation cases. Settlements have been effected as rapidly as possible on an unprecedented scale, by the War Department, Navy Department, Maritime Commission, Housing Authority, and other acquiring agencies of Government, and by the Department of Justice, on thousands of tracts where the margin of dispute as to value between the owner and the Government was not too great. There are left a great mass of controverted cases in which vast differences of opinion exist between Government counsel, who serve as watchdogs for the taxpayers, and counsel for the property owners, who sees "gold in them thar hills".

* * * *

Many examples could be given, but it is sufficient that no successful industrialist today would think of starting to operate a manufacturing plant without a full and complete analysis by engineers in respect to size, location, in respect to transportation facilities, heating, lighting, travel distance for labor, location of offices, sanitary facilities, construction, special machinery and equipment. ****Many properties might look very convincing as industrial sites to the layman, but were in fact monuments to obsolescence and inefficiency.

* * * *

IV. *The Engineer in Court*

It is for the foregoing reasons that the engineer frequently becomes the chief appraisal witness in the trial of contested cases. He does not determine value—the judge and jury do that. The appraiser estimates value. He expressed an opinion. The margins of opinion are so wide that Mr. Justice Roberts of the Supreme Court of the United States has recently said:

It is usually said that market value is what a willing buyer would pay in cash to a willing seller. Where the property taken, and that in its vicinity, has not in fact been sold within recent times, or in significant amounts, the application of this concept involves, at best, a guess by informed persons.

The very fact that opinion is at issue creates the first pitfall for the expert witness. He is apt to be unduly influenced and his opinions colored with bias toward the employer who pays his expert fee. It is common knowledge that expert testimony can be purchased to support a given contention. The only limitations on such testimony arise when it is at such utter variance with reasonableness, that either the opinion is patently dishonest or the appraiser is incompetent. In either event his testimony falls with a dull thud.

I am glad to say that fidelity to the highest standard of professional conduct and the sanctity of the oath which every witness must take, still assure straightforward, honest opinions as to the "highest and best use" to which the property is adapted and the value of it for those purposes.

Submitted as:

ITEMS OF GENERAL INTEREST

British Columbia Engineering Society

To Use University Publication

From the British Columbia Engineering Society comes the following announcement:

"Due to war conditions, and by courtesy of the Alumni Association of the University of British Columbia, the field of present and post-war engineering problem previous covered by The Blueprint, will henceforward be incorporated in The Graduate Chronicle. This publication will circulate to and have the support of both the Alumni Association and the British Columbia Engineering Society."

Civil Responsibility of the Engineer

Discussed in Scotland

The American Engineer is indebted to The Graduate Chronicle of the University of British Columbia for the following abstracts from a recent address by W. Sutcliffe, M.I.E.E. to the Scottish Center of the Institution of Electrical Engineers.

"What is an engineer? The term was first applied to persons employed in the construction of engines of destruction, or on work for military purposes. In the middle of the 18th century a new class of engineer arose, principally engaged in the building of roads, bridges, aqueducts and canals, for purely civil purposes; they soon became known as 'civil engineers' as distinct from the military class.

"Later, in 1928, The Institution of Civil Engineers came into existence, and their charter describes civil engineering as 'the art of directing the great sources of power in Nature for the use and convenience of man, as the means of production and of traffic in states both for external and internal trade, as applied in the construction of roads, bridges, aqueducts, canals, river navigation and docks, for internal intercourse and exchange, and in the construction of ports, harbors, moles for breakwaters and lighthouses, and in the art of navigation by artificial power for the purposes of commerce, and in the construction and adaptation of machinery, and in the draining of cities and towns.' "

"Charged with the responsibilities as laid down in their Charters, the three leading engineering Institutions insist on qualifying tests before admission to their respective bodies. No person can be accepted into the chartered class of engineers unless he is fully qualified by training and experience.

"This is rightly so if we, as engineers, are to assume equal status with our brothers in other professions, such as law, medicine and accountancy. Surely the contributions to human progress, and the benefits conferred on the community by engineering, are not less than those of the professions just mentioned; and, if that criterion be accepted, who can logically deny to the engineer a position in the front rank of all professional callings?

"It is true that science and engineering may be prostituted to base purposes, and in this connection mechanical warfare has given the cynic many opportunities for caustic criticism. But to reproach the engineer because the worthy products of his skill are misapplied is unwarranted; beneficent aims can be perverted to evil ends.

"As good often results from evil, I am encouraged to hope that out of the present conflict and welter a new conception of man's obligations to his fellow-men will arise; the furnace of war will surely remove the dross from our coarse natures and leave the purer metal behind.

"Is the engineer in his corporate capacity taking an adequate part in the conduct of public affairs? Would not the community benefit if he adopted a less detached attitude to the social and economic problems of our age?

"The implied charge of being too self-centered in his profession is partly true.

"Some may think it odd that the engineer, with his logic, his analytical mind, and his refusal to accept compromise between truth and error, should not apply his faculties to the study and solution of the many problems commonly regarded as being outside the orbit of his own profession.

"The principal attributes of the engineering mind are powers to observe, to analyze, to deduce, to correlate, to devise, to apply and to plan ahead, and it is pertinent to ask whether these are not the basic faculties required by those who are called upon to plan and direct our national policy. If this is agreed, should the engineer express his views and suggest new methods of approach to the solution of national issues, on lines not unlike those followed by himself when dealing with engineering problems?

In the Presidential Address delivered to the International Engineering Congress at Glasgow in 1938, Viscount Weir said:

' "I think it will be admitted that there is an engineer's type of mind, and that his method of thought has certain characteristics arising from the nature of the problems he has to deal with, and the immediate results which follow from any failure of his to deal satisfactorily with them.

' "I venture to suggest that this type of mind and method of thought might be applied with advantage to the treatment and solution of some of the major world issues today. Even world statesmanship itself might learn that there are other ways of approach to the solution of its problems than the traditional lines of political thought.

' "In many ways our hope for the future must be in a closer approach between the statesman, the scientist and the engineer. To some extent the latter must increasingly have regard to political considerations, inasmuch as the statesman has to deal with those intangibles, the conduct and reactions of mankind.' "

"Perhaps, as Lord Weir suggests, a solution might be found in a closer approach between the scientist and engineer and those in control of national policy. Each might learn, with advantage, something from the other's methods of dealing with difficult problems. Maybe the time is ripe for the coming of a new school of thought, to expound a doctrine for the guidance of those who would attempt to solve our national problems in a manner whereby human susceptibilities, and the promptings of the scientist and engineer, are alike respected."

Our Foundation

Editorial Appearing in April Issue of Ohio Engineer

The Chapters are our foundation. Most everyone is agreed on that theory and it may seem strange to some that we should take time and space to devote to such a subject.

The foundation of our professional structure is the part we must build with care in these days of our early growth. However, this must not be done to the eclipsing of the State or National Society. In other words, much attention needs to be given to the pillars and the roof of our professional structure also. The Pillars or the State Societies, when resting on a good foundation, are much more certain to properly support the Roof or the National

Society. When all 48 pillars are in place the larger will be the roof and the greater will be the protection of that roof.

What will there be left to do after the 48 pillars are all in place? As we see it the problem will be the same as it is today, build a bigger and better foundation on which to build bigger and better pillars which in turn will be able to support a bigger and better roof.

The foundation is, without doubt, the most important part of any structure. It is the part of a structure many times forgotten when a large beautiful building begins to appear, but it is still of the first importance.

The workers in the chapters may at times feel insignificant and unimportant but they should always remember that they are working on that foundation, possibly the least noticed and spectacular but by far the most important part of our Professional Structure.

Build your Chapter into a strong force for professional ethics, pride and fellowship. Build your Chapter to serve your community and our profession well. Build a bigger and better foundation looking to the day when it will help support a Professional Structure with 48 pillars and a roof uniting us into one voice for the service of the profession and humanity.

N. C. S. B. E. E. PROCEEDINGS

Twenty-Third Annual Meeting

A bound copy of the proceedings of the 23rd annual meeting of the National Council of State Boards of Engineering Examiners. The publication contains considerable worthwhile data and a perusal is recommended.

Among the items of general interest are the following: p.186, B-C-D pp. 168-169-170-171-172.

NATIONAL BUREAU OF ENGINEERING REGISTRATION

Purpose and Administration

The National Bureau of Engineering Registration is operated as a function of the *National Council of State Boards of Engineering Examiners,* under the direction of a standing committee of the Council, with an Advisory Board of representatives from national engineering societies. It was established primarily to minimize the effort and expense of engineers practicing in more than one state in securing reciprocal registration. The Bureau also constitutes a clearing house for state registration authorities, employers, societies, and others, acting as a reliable source of verified information regarding the professional records of engineers.

Under the Constitution of the United States there can probably be no national registration in any profession, the right to legally authorized citizens to practice a given profession being vested in the several states. Certification by the Bureau, therefore, is not a prerequisite for registration in any state, nor is it binding upon the State Boards of Registration, nor will the Bureau assume any responsibility to the applicant in securing his legal registration authorizing the practice of engineering. *The By-Laws of the National Council and the registration laws or regulations of most states specifically provide, however, for acceptance of certificates issued by the Bureau, and all but three of the Member Boards of National Council have definitely indicated that they will accept certification by the Bureau, with indorsement by a State Board, as competent evidence of qualification for registration.* All State Boards reserve the right to take whatever action they deem necessary to conform with the requirements of their laws and regulations in connection with any application for registration in their State.

Engineers desiring legal registration in any state should communicate direct with the State Board in that state and secure its application form and regulations. Applications to State Boards for reciprocal registration should be accompanied by photostatic copies of Certificate of Qualification issued by the Registration Bureau.

New York.—Certification by the National Bureau of Engineering Registration is given due weight by the New York State Board. It does not relieve the applicant of the necessity of meeting in the engineering profession", permitting waiving of extates acceptance of the candidate as possessing "recognized standing in the engineering profession", permitting waiving of examinations if the candidate shows more than 15 years of satisfactory professional experience.

California.—The office of the Attorney General has ruled that the duty and obligation of the California Board cannot be delegated to another State Board or to the National Bureau of Engineering Registration.

Florida.—"The Florida Board must examine the qualifications of the engineers from other states on the merits of the individual cases. If an engineer is registered in one of the other states, and if he has received national eminence in his profession, he is registered without written examination. If an engineer is registered in another state and has taken a written technical examination in that state then the Board may use, at its discretion, the results to take a one-day written examination based primarily upon For engineers who have registered under the 'Grandfather Clause', or who have registered without written examination in other states, we carefully scrutinize the records and request them to take a one-day written examination based primarily upon practice."

Idaho—The law does not permit them to grant registration upon the basis of a Registration Bureau Certificate of Qualification; however, they recognize that some prestige is attached to such certification.

Louisiana.—Requires "that the applicant must furnish with the Registration Bureau Certificate of Qualification a special form satisfactorily filled out by the Board in the State in which he was originally registered."

Bureau Procedure and Requirements

Verified Professional Record

The Bureau will investigate, verify, and evaluate the professional record of any *registered engineer.* For such verification the applicant must submit to the Bureau on its prescribed form his complete record, including education, professional experience, legal registration, technical examinations, membership in professional or scientific societies, and references as to character and experience. The Bureau will then make an independent investigation of every item in this record and will either verify each one or indicate on the record the items which have not been verified, with reasons.

Indorsement by State Board

Before proceeding with the verification and certification of the professional record of an applicant, his application will be submitted by the Bureau to the State Board with which he is registered in the state of which he is a resident or, in some cases, in the state in which he is practicing; and said Board at its discretion may require the applicant to furnish any additional information or to pass such written or oral examination as may be deemed necessary to establish his ability. When in the opinion of said Board the applicant is entitled to be recommended to other State Boards for registration, his Certificate of Qualification will be so indorsed or released by the Board.

Certificate of Qualification

The Bureau will certify the verified professional record of an applicant who meets the following requirements:

a. *Graduation Plus Experience* — Graduation from an engineering curriculum accredited by the Engineers' Council for Professional Development; and a specific record of an additional four years or more of experience in professional engineering work of a character satisfactory to the Bureau, and indicating that the applicant is fully competent to practice professional engineering; provided, that in a case where the evidence presented in the application does not appear to the Bureau conclusive nor warranting the issuing of a Certificate of Qualification, the applicant may be required to present further evidence for the consideration of the Bureau and may also be required to pass an oral or written examination, or both (given by the Registration Board in his home State); or

b. *Examination Plus Experience.* — Successfully passing a written, or written and oral examination (given by the Registration Board in his home State) designed to show knowledge and skill approximating that attained through graduation from an accredited engineering curriculum; and a specific record of eight years or more of experience in professional engineering work of a character satisfactory to the Bureau and indicating that the applicant is fully competent to practice professional engineering; or

c. *Long Established Practice.* — A specific record of fifteen years or more of lawful practice in professional engineering work of a character satisfactory to the Bureau and indicating that the applicant is fully competent to practice professional engineering, and provided applicant is not less than thirty-five years of age.

Qualifying Experience. — Determination of applicants' competency will be based less on length of experience (provided the minimum is met in each case) than on the breadth, quality, and importance of pertinent experience, degree of progression, evidence shown of ability to accept increasing responsibilities, and of the possession of personal qualifications required for successful engineering work.

The practice of professional engineering includes any professional service, such as consultation, investigation, evaluation, planning, design, responsible supervision of construction or operation, in connection with any public or private utilities, structures, buildings, machines, equipment, processes, works, or projects, wherein the public welfare, or safeguarding of life, health or property is concerned or involved, when such professional service requires the application of engineering principles and data. Engineering teaching may be construed as engineering experience. The satisfactory completion of each year of an approved curriculum in engineering in a school or college approved by the Board (and Bureau) as of satisfactory standing, without graduation, shall be considered as equivalent to a year of experience in subsection "b". Graduation in a curriculum other than engineering from a college or university of recognized standing may be considered as equivalent to two years of experience in subsection "b"; Provided, however, That no applicant shall receive credit for more than four years of experience because of undergraduate educational qualifications.

It is interpreted that the practice of professional engineering does not include the work ordinarily performed by persons who operate or maintain machinery or equipment, or whose only experience has been in the execution, as a contractor, of work designed by a professional engineer or the supervision of the construction of such work as a foreman or superintendent.

An applicant, whose status is classified under subsection "b" of the requirements and who has not passed an engineering examination satisfactory to the Board and Bureau, will be notified to this effect and, if desired by him, a State Board of Engineering Examiners or Registration designated by the Bureau will conduct the required examination. The applicant will be required to pay for any expense incurred.

Fees and Applications

The Bureau is a non-profit agency and the fees charged represent only the actual cost of clerical work, printing and postage.

The charges for services of the Registration Bureau are as follows:

1. Fee for investigation, verification, and certification, including one photostatic copy of Verified Professional Record, Certificate of Qualification and State Board Indorsement (one document)—$20.00.

2. Additional copies of Certificate of Qualification (the document referred to above)—each $2.00.

3. One set of one photostatic copy of Certificate of Qualification and one each of the answered questionnaires from the five references given in Section 1 of the Bureau application form, to be mailed direct to a State Board. (Required by few State Boards)—$5.00.

4. One set of one photostatic copy of Certificate of Qualification and one copy each of all answered questionnaires in connection with the Bureau application, to be mailed direct to a State Board. (Required by few State Boards)—$10.00.

Fees must accompany applications or orders for copies and will not be refunded if application is not approved.

An investigation such as that conducted by the Bureau often requires considerable time. It is suggested, therefore, that an engineer should not wait until he actually needs a Certificate of Qualification. He should, in fact, file his application with the Bureau as early as practicable so that certification by the Bureau may be available for presentation to State Boards of Engineering Examiners or Registration with which he desires registration or for other appropriate purposes.

It should be noted that a Certificate of Qualification will not be issued by the Bureau except jointly with a State Board with which the applicant is already registered and which will indorse or release his application.

Applications must be submitted on forms prescribed by the Bureau and must be filed with the National Bureau of Engineering Registration, P. O. Drawer 1404, *Columbia, South Carolina.*

Number of Registrants in Each State

As of June 30, 1943

STATE	Engineers	Land Surveyors	Total Registrants	Non-Resident Engineers
Alabama	487	77	564	85
Alaska	53	0	53	11
Arizona	474	17	491	187
Arkansas	302	0	302	75
California	4,550	280	4,830	300
Colorado	578	40	618	135
Connecticut	1,853	153	2,006	458
Delaware	421	59	480	56
Florida	770	99	869	136
Georgia	893	290	1,183	191
Hawaii	197	53	250	21
Idaho	305	20	325	105
Illinois	916	930	1,846	.....
Indiana	1,924	35	1,959	401
Iowa	1,336	28	1,364	448
Kansas	490	0	490	174
Kentucky	1,021	0	1,021	228
Louisiana	568	107	675	129
Maine	572	0	572	82
Maryland	1,388	93	1,481	103
Massachusetts	595	16	611	51
Michigan	2,700	300	3,000	200
Minnesota	1,254	71	1,325	286
Mississippi	408	0	408	110
Missouri	1,600	0	1,600	7
Nebraska	823	0	823	171
Nevada	187	0	187	57
New Jersey	3,323	214	3,537	798
New Mexico	309	41	350	112
New York	14,366	250	14,616	170
North Carolina	463	77	540	133
North Dakota	.....	.....	.....	.....
Ohio	8,878	553	9,431	1,005
Oklahoma	1,058	.....	1,058	.....
Oregon	1,302	0	1,302	385
Pennsylvania	3,878	655	4,533	658
Puerto Rico	982	152	1,134	.....
Rhode Island	588	50	638	114
South Carolina	263	43	306	91
South Dakota	161	35	196	56
Tennessee	404	0	404	96
Texas	4,453	.....	4,453	598
Utah	745	46	791	.....
Vermont	305	0	305	94
Virginia	634	178	812	164
Washington	1,324	60	1,384	.....
West Virginia	878	0	878	206
Wisconsin	1,576	0	1,576	296
Wyoming	249	61	310	124
Total	72,804	5,083	77,887	9,307

Fragments from

STATE & SOCIETY ACTIVITIES

MINNESOTA

1944 Society Committees

Inter-professional Committee, George M. Shepard, St. Paul
Legislative Committee, Harold E. Chard, St. Paul
Comm. on Employment Practices, H. E McWethy, Minneapolis
Registration Committee, T. S. Thompson, Minneapolis
Membership Committee, N. T. Rykken, Duluth
Public Policy Committee, A. J. Duvall, St Paul
Civil Service Committee, E. J. McCubrey, Minneapolis
Junior Membership Committee, Myron L. Jones, St. Paul
Post War Planning Committee, Geo. Schroepfer, Minneapolis
Press Publicity, Editing & Publishing, Wm. G. Klett, St. Paul
University Contact Committee, Ed F. Jones, St. Paul
Historical Committee, Gordon Bodien, Minneapolis
Speakers Bureau Committee, W. H. Wheeler, Minneapolis
Annual Assembly Committee, Harold E. Olson, St. Paul

Membership Drive

Action was taken at the Council meeting to adjust the dues schedule for the remaining months of 1944 in order to assist the planned membership drive. New members will pay states dues on the basis of $1.00 for each month remaining in the year, plus Federation and N.S.P.E. assessment. In regard to the latter the following allowances will be made: For Federation assessment, ½ or $1.00 dues per new member after July 1st. For N.S.P.E. assessment only of the national dues for the full quarters remaining in the year. The national assessment is now $4.00 per year, so this would amount to an allowance of $1.00 per quarter less for new members for the remainder of the year.

Secretary Harold Olson and Membership Committee Chairman N. T. Rykken already are pushing ahead the campaign for new names on the roster and new participants in professional activities of the engineer. The objective is to double the membership, and whether or not that ultimate goal is attained during 1944, it is certain that the enthusiasm being shown in this work will produce the kind of results that count.

Probably every member of the Association has dealings or contacts during the year with some engineer who should be a member of his professional association, the M.A.P.E. A discussion of problems facing the engineering profession with such prospective members, and an explanation of what M A.P.E. is doing about them is certain to create some interest in membership. The membership committee cannot make all the contacts. It can lay the plans, and assist individual members in furnishing non-members who may be interested with full information regarding M.A.P.E. activities. The committee asks that you keep membership applications handy, and the next time you get a chance get that prospective member to sign while the subject is still fresh in his mind. Get him to a district meeting where the discussion of problems facing the profession should clinch his determination to remain and take part in M.A.P.E. work.

Council Schedules Meetings

Regular dates have been established for the Society Council meetings for the remainder of the year. These dates are: May 8th, July 8th, September 9th and November 4th. Councillors committee chairmen and members are urged to keep these dates in mind as to avoid conflict with district meetings and other events, if possible.

Legislative Program

It is the plan of the state officers and the legislative committee to carry the program of education and action into the district societies in the very near future. A full understanding by the members of the problems involved and the need for the proposed changes as approved by the House of Delegates is the first and most necessary step toward achieving legislative success during the next session of the legislature. Following that, every legislator must be contacted in his home district where there is time for discussion and for him to make up his mind free from the pressure that he is under when the legislature is in session. In this way, opposition that is based on ignorance or misconception of the Bill's purpose and effects, or simply on lack of time to consider during the turmoil of legislative activity will be avoided. This work must be done by and through the district societies.

Council Meeting of March 4, 1944

This first council meeting after the annual convention was, as might be expected, an organization meeting preparing for an expected busy and important year. Every district was represented and the chairmen of most of the new committees were also present. Business was expeditiously carried on from 9:30 in the morning till about 3 o'clock in the afternoon.

The most important of the many objectives for the coming year are—(1) Carrying information on the proposed amendments to the registration law to each member of the legislature. (2) A substantial increase in membership. (3) Publicizing the new engineer's classification and salary recommendations. New functions added are to include a committee on inter-professional relationship and one on employment practices, the latter to be carried on by a committee of three, the membership of which shall change by only one each year so that ultimately each appointee will serve for at least three years. The purpose of this latter committee is to become expert in all matters pertaining to employer-employee relationships.

The more important items of the business actually transacted include the adoption of a $5,887 budget, which while differing somewhat from the budget of last year, is not very much different from the actual expenditures of the previous year, except that the M.A.P.E. will pay a little bit more toward the maintenance of the federation office in St. Paul, and two important items that the budget committee wanted to include were necessarily left out because of lack of funds. These were the employment of a full time executive secretary and the establishment of a legislative fund of $1,000. The first of these items was left for further consideration and the latter were referred to the council lors of the respective districts to get the sentiment in their districts of ways and means of raising such a fund and indeed the advisability of doing so.

Future council meeting dates were tentatively established as follows: May 8, July 8, September 9 and November 4. Committees and their chairmen were announced as follows: Historical, Bodien; Press Publicity, Klett; Speakers Bureau, Wheeler, Chmn., Lind, Vice Chmn.; Public Policy, Duvall, Chmn., Foster, Vice Chmn.; Inter-professional Relationship, Shepard; Registration, T. S. Thompson, Chmn., Borne, Vice Chmn., Civil Service, McCubrey, Chmn., Axel Johnson, Vice Chmn.; Junior Membership, M. L. Jones, Chmn., Earl Ewald, Vice Chmn.; Membership, Rykken, Chmn., Harold Olson, Vice Chmn.; Post War Planning,

Schroepfer, Chmn., Beadie, Vice Chmn.; University Contact, Ed Jones, Chmn., Furber, Vice Chmn.; Legislative, Chard, Chmn., Leonard, Vice Chmn., Thompson, 2nd Vice Chmn.; Employment Practices, McWethy, 3 years; Blunt, 2 years; Waits, 1 year.

Lively and interesting discussions were held on numerous topics which did not develop into specific actions.

District No. 2—Mankato

District No. 2 had its annual meeting at the Saulpaugh Hotel in Mankato on December 9, 1943. The following officers for 1944 were elected: F. D. Minium, President; W. S. Ekern, Vice President; Cal. Krosch, Secretary-Treasurer; and Frank O. Jones, Director.

Our next meeting is scheduled for March 8th at the Saulpaugh Hotel in Mankato. It is to be a dinner meeting and our new officers will be installed.

Mr. H. R. Shipman, a sanitation engineer and one of our newer members, recently joined the armed forces.

About 20 members from the 2nd district attended the annual convention in St. Paul. All were agreed that an excellent program had been arranged and that this convention was the best to date.

W. S. Ekern
Secretary-Treasurer

District No. 4—St. Paul

Officers for the coming year: William G. Klett, President; William McG. Beadie, Vice President; M. W. Hewitt, Secretary; T. W. Thomas, Treasurer; Myron L. Jones, Chairman Program Committee.

Mr. Klett is Chairman of the State Committee on Press, Publicity, Editing and Publishing.

Our next meeting is March 10th.

M. W. Hewitt

District No. 5—Minneapolis

At the annual meeting of District No. 5, held January 28, 1944 at the Minneapolis Y.M.C.A., the following officers were elected: President, C. K. Preus; Vice President, T. S. Thompson; Secretary, G. E. Bodien; Treasurer, H. Ray Chapin. Member, State Nominating Committee: Harold E. McWethy; Executive Committee (2 year term): Clifford A. Brandt, Byron H. Clingerman, Charles W. Britzius. Delegates: Leonard F. Boon, Paul E. Dahl, J. R. Furber, R. R. Herrmann, Robert N. Lohn, Harold E. McWethy, Fred T. Paul. Alternates: Edgar W. Johnson, Walter E. Duckett, George J. Schroepfer, I. E. Odendahl, C. C. Hansen, E. J. McCubrey, Arthur S. Krefting.

Mr. James A. Colvin and Mr. Hugh C. Keibee, elected for a two-year term last year, will continue to serve on the Executive Committee this coming year. The new Executive Committee had a meeting on February 29th at which time plans were laid for the year's program. The next District No. 5 meeting will be Friday evening, March 24, 1944 at the Minneapolis Y.M.C.A.

Gordon Bodien, Secretary

District No. 6—Detroit Lakes

District Six has a new member. Mr. Arthur Grant of the State Highway Department.

District Six will have to elect a new councillor as Mr. Frank Shepherd has been elected to the office of State Treasurer.

Most of the members of District Six attended the annual meetings held in St. Paul last month.

Your reporter received his greeting, was processed at Fort Snelling and rejected.

G. H. Holmquist

District No. 7—Windom

Owing to travel conditions, District No. 7 decided to hold their annual meeting for the election of officers and delegates in St. Paul just prior to the State Convention. This meeting was held in Room 402, Lowry Hotel, St. Paul, at 1 P.M. on Wednesday, February 9, 1944, twelve members being present.

The principal business coming before the meeting was the election of officers for the ensuing year and delegates to the convention. The following officers were elected, namely: J. S. Wagnild, President; E. S. Ward, Vice President; and R. N. Forsberg, Secretary-Treasurer.

The following delegates were elected to the convention, namely: J. S. Wagnild, George Welch, and R. N. Forsberg. The following members were elected as alternates: A. R. Gareis, Clayton Swanson, and H. W. James.

The Highway Conference which preceded the State Convention was attended by approximately all the county engineers in this district. Some of the engineers found it impossible to stay over for the convention; therefore we did not have 100 per cent attendance on Friday, and possibly not over 30 per cent on Saturday. The expressions which I have received to date relative to the convention were very favorable. *J. F. O'Meara*

District No. 8—Duluth

New officers for 1944 are as follows: N. T. Rykken, of Duluth, President; E. F. Johnson, of Virginia, Vice-President; E. C. Slagle, of Duluth, Secretary-Treasurer. Mr. P. D. Mold of Duluth was elected to the State Nominating Committee and Mr. J. Grant Waits, District Councillor.

District 8 held their regular quarterly meeting at the Marmas Cafe, Virginia, on Friday, February 4th. We were honored with the presence of President Hermann, who outlined problems of interest which were taken up by M.A.P.E. during the past year. President Hermann also outlined the purposes and aims of the association.

In addition to the elected delegates, Mr. T. G. Odegard, Mr. Joseph Hejda and Mr. Neal Nickerson, who attended the state meeting, there were also Messrs. N. T. Rykken, Axel Johnson, Innis Ward, Jack Salo, Charles Foster, E. R. Boyce, Art Tews, P. D. Mold and J. R. McQueen

District 8 welcomes a new member, Mr. William L. Bush, of Virginia *E. C. Slagle, Secretary*

NEW YORK

Annual Meeting May 5th-6th

The 19th annual meeting of the State Society will take place at the Hotel Commodore, New York, N. Y. on Friday and Saturday, May 5th and 6th.

Following is an outline of the program as developed at the time this issue went to press.

Friday — May 5th

2:00 P.M. Board of Directors Meeting
6:00 P.M. Board of Directors Dinner
8:00 P.M. General Smoker—Entertainment and Refreshments
8:00 P.M. Ladies Theatre Party

Saturday — May 6th

9:00 A.M. Committee Meetings
10:00 A.M General Membership Meeting
11:00 A.M. Engineers-In-Training and Non-Member Forum
12:00 A.M. Recess and Reception
12:30 P.M. General Luncheon Meeting
Speakers—Hon. Lawrence A. Appley, Executive Director of the War Manpower Commission, Washington, D. C.; Professor Harry E. Nold, President, The National Society of Professional Engineers.
3:00 P.M. General Membership Meeting continued.

Nominations — 1944

In conformance with the provisions of the Society Constitution, the candidates selected by the Nominating Committee are: President, Clarence W. Post; First Vice-President, Charles W. Burke; Second Vice-President, William H. Larkin; Financial Secretary, Ernest F. Fox; Treasurer, Patrick M. Cory. Directors-at-Large—Zone No. 1, James Fouhy; Zone No. 2, Martin Nelson; Zone No. 3, Solon E. Friedeberg. For Members of the Nominating Committee (for the 1945 election), Newell L. Freeman, George T. MacBeth, William W. Perry, J. Leo Scanlon, Frederick H. Zurmuhlen.

Chapters have been duly notified in the manner required and members are urged to return their ballots in accordance with instructions.

News Letter Excerpts

"The Society is operating at its maximum capacity with present funds. Our officers, both past and present, have given unselfishly of their time and energy to carry on. The scope of our Society is broad enough so that there is plenty of room for growth.

In order to achieve our object of maximum service to the public, as a Society representative of the Engineering Profession, we must grow, and grow now. Growth comes from increased interest, increased activities, increased funds, and increased service. In short, much more must be put in, to realize our goal.

To accomplish this, it was the recommendation of the Committee that the annual dues should be increased from $5. to $10. The Executive Board was unanimous in its approval of the report. The recommendation will shortly be submitted to the members for approval."

Albany Chapter

Issues Year Book

The Albany County Chapter has just released its Year Book for 1943-1944. Containing the roster of membership, the officers, committees, constitution-by-laws, general information relevant to the Education Law and an outline of the Chapter history, the publication is up to the standard of previous years.

News Bulletin Items

A recent issue of the News Bulletin contains some interesting data on the State Post War Public Works Program. As of March 1st, more than 1300 projects costing in excess of $110,000,000 have been approved. There are presently pending 2600 projects amounting to $200,000,000 and on file some 700 proposals estimated to cost in excess of $60,000,000. The totals submitted amount to 460 projects with an esimated value of $370,000,000. All plans must be prepared by licensed professional engineers registered in New York State. The state will defray at least 50 per cent of all plans and specifications.

(Ed.: Note other data including photos too late for publication. This is the May issue).

Bronx County

Installs Officers

At its recent annual meeting, the following officers and directors for the ensuing year were installed by President James F. Fairman of the New York State Society: President, John H. Knight; Vice President, Joseph T. Houlihan; Treasurer, Harrison Blankstein; Secretary, John A. Young; Directors for three years, Edward T. Crinnion, Charles F. Giraud, Sylvester W. A. Murphy, Israel A. Poles.

President Knight in outlining his plans announced the appointment of Committee Chairmen and expressed the hope that Committees would not only function but manifest initiative. The Chairmen of the Standing Committees are: Membership, Benjamin Harris; Legislative, Edward B. Fitzpatrick; Ethics and Practice, Charles F. Giraud; Public Relations, John V. Timoney; Professional Conduct, William L. A. Arctander; Public Works and Improvement, John J. Kelly.

Erie Chapter

Excerpts from Bulletin

"Postwar Planning is much more than a subject of talk. We note these features:

1—Some projects are necessary improvements to be considered without regard for employment.

2—Most projects are to be considered on the basis of employment first, utility second.

3—It is estimated that the total national employment following the war will be 54 million and will gradually reduce itself to 48 million and will remain at 48 million for a considerable time.

4—The total national employment figure in the period of 1932-1936 was 36 million.

5—Public Works is a transition feature to serve the Industrial program flat spots.

6—Industry must carry the load."

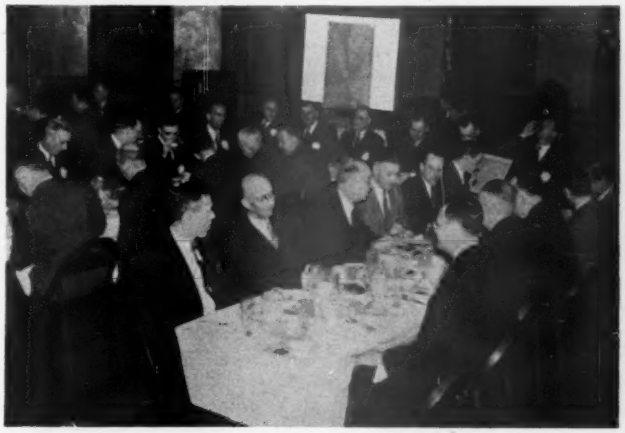
"If you have not received recent copies of the Annual Register published by the State Education Department, do not give up hope. A register is due every one listed. Many of us did not receive the 1942 nor the 1943 register. The 1944 is now being prepared for distribution to those who have paid one dollar fee for current year."

"The Nominating Committee appointed by President E. J. Nunan consists of five past presidents; N. S. Snyder, M. McDonald, E. G. Speyer, J. L. Scanlon and C. R. Waters. Nominations for ensuing year as follows: President—Norris C. Barnard; Vice-President—John J. Landers; Secretary—Eugene Eldridge; Treasurer—Arthur B. Weaver; Director (3 years)—Two to be elected—Cameron Ross and G. M. Magrum. Hold over Directors for one year—Paul Fitzer and Richard Wohler. Hold over Directors for two years—Edward R. Coon and Carlos Harrington." The above slate was elected unanimously according to an announcement made at the April 10th meeting.

The April 10th meeting of the Chapter was held at the Markeen Hotel. A dinner preceded the meeting which was addressed by Member Gust. H. Karlsteen on the subject of "Engineering in the Field of Practice". Three new members were welcomed at the same meeting.

Niagara Chapter

From T. E. Thompson, Chairman of the Publicity Committee, comes the following account of the best attended Chapter meeting so far this year.



DINNER PRECEDING MEETING

"The Niagara County Chapter had an attendance of over 100 engineers at its meeting when Gustav Werner and Allen D. Look presented a lecture and movie pictures on 'Safety and Tunneling' which described safety precautions and details of the work connected with the construction of the 85-mile-long New York City Delaware Aqueduct Project which is the world's longest tunnel. Mr. Werner who is the supervising mine and tunnel inspector for the New York State Department of Labor, gave a lecture part of the program in which he described the difficulties of such a project. The work was performed by ten different contractors with incentives or bonuses based on rate of progress. This had a tendency to make the work more difficult from the safety standpoint as each contractor had his own ideas on safety for this type of work and bonuses always tend to make one disregard safety to some extent.

Mr. Allen D. Look from the U. S. Bureau of Mines presented a picture entitled 'Safety and Tunneling' which showed details in the construction of the above tunnel and described pictorially the safety precautions and hazards brought out by Mr. Werner in his talk. Following the lecture and picture a discussion panel, comprised of Messrs. Look and McGrath of the U. S. Bureau of Explosives, answered questions by the members."

Rockland County

The following communication by Chapter President Newton F. Ronan has been given wide circulation through the medium of State Society President Fairman:

"Dear Sir:

The Engineering Profession is facing a more serious problem and period than ever before in its existence. The major problem

to be faced at this time is the relation of the profession with labor unions. A number of Professional Engineers have joined unions and are in favor of Engineers being unionized—professionalism is being forced, by existing economic conditions, to compete with unionism, as witness 'Local No. 30 of the International Federation of Technical Engineers, Architects and Draftsmen's Unions' of the American Federation of Labor, in Kansas, a going organization!

This is a definite economic problem which will be solved (1) *By* the Profession through organization, or (2) *For* the Profession through the A.F. of L. and the C.I.O. Each Professional Engineer is free, at the present, to choose. If he is convinced that professional economic problems should be solved by the Profession itself, his duty is, I believe, to affiliate actively with an organization representing the entire field of Professional Engineering on a Nation-wide scale.

The unionization of even a considerable minority of the profession must ultimately lead to confusion and disintegration. The whole Profession must unite or be decimated. The question is worth serious individual thought and definite organized action and this Chapter and its parent State and National Societies extend an invitation to you to join them to increase the effectiveness of their work in promoting the economic welfare of the Engineer.

You will receive occasional correspondence from the State Society which we ask you to read carefully, with this letter in mind."

Very truly yours,
Newton F. Ronan
Chapter President

Westchester County

Seeks New Members

From the Chapter News one learns that membership extension is a major objective for 1944.

"The following engineers, whose applications were announced last month, have been accepted as members of the Chapter: Edward H. Carr, 2 Hawthorne Place, Yonkers; William T. Dobson, 20 Wilson Road, Pleasantville.

Additional applications for Chapter membership have been received from the following engineers: Wilford L. Stork, New York City College, 139th St. & Convent Avenue, Elwood H. Aldrich, 66 Milton Road, Rye, John J. Balint, 1 Hoover Road, Yonkers, Milton B. Lawton, 81 Anderson Avenue, Scarsdale."

Again quoting from the News:

"Our Society takes pride in its democratic organization, and democracy succeeds only to the extent of the participation of the members. Engineers as a group are inclined to hide their lights—they lack initiative. Working on a committee will help develop their talents and leadership ability. Do not be bashful, volunteer for a job. Let your president know of your interests, and he will do all he can to find a place for you. The following fields are suggested: Ethics and Practice, Secretarial, Legislation, Public Relations, Membership, Progrom, Special Interest, etc."

"Are you an active member, the kind that would be missed,
Or are you just content to have your name upon the list?
Do you attend the meetings and mingle with the flock,
Or do you stay at home and criticize and knock?
Do you take an active part to help the work along,
Or are you satisfied to be the kind that "just belong"?
Do you ever go to visit a member who is sick,
Or leave the work to just a few and talk about "the clique"?
There's quite a program that I'm sure you've heard about
And we'll appreciate it if you too will come and help us out.
Think this over member, you know right from wrong,
Are you an active member or do you just belong?"

OHIO

Society Trustees Meet

The April issue of the Ohio Engineer informs the reader that: "Back from Florida with a healthy looking tan President Rolph made his first appearance before the Board in his new role as Prexy. After the usual introduction of members and guests (and there were some more new faces this month) President Rolph called on the Secretary and the Treasurer for reports. Treasurer Shank reported a new high in monthly receipts, $3843.10, which is almost twice as much as was ever received in any one month before. The surplus for the month was reported as $1219.52 giving us a total of $7114.03 as our net financial assets as of March 31, 1944.

"Committee reports were called for by the President. Membership Chairman George Kerr was absent but Executive Secretary Chacey reported an increase for the month of 50 new or reinstated members bringing the total to 2142 (this is 14 more than was reached last year). Chairman Pettis of the Professional Practices stated he would have something to report on the use of the Engineer's seal at a later date. Chairman Graf of Chapter Relations announced that Engineer Chacey was going to Chillicothe on April 10 and Engineer Rolph was going to Springfield on April 12 for Chapter meetings. Chairman Kennedy of the Violations Committee was absent because of illness in his family. Past President Graf reported that the matter of 'Safety Engineers' was nearing a solution. It is proposed to give an examination in July. This would qualify any who could pass. No more examinations for Safety Engineers would be given, however, as it is not proposed to make that a branch of Engineering. Engineer Neff of Cleveland and Dee of Akron cited violations appearing in the Cleveland Plain Dealer and other publications. These were turned over to committees for action. Chairman McDowell of the Engineering Contracts Committee was not present but his preliminary report of some 4000 words was in the hands of Prexy Rolph. It will be printed in the May issue of the Ohio Engineer. Membership Trophy (see elsewhere). Chairman Hubbard of Engineers in Industry was absent because of illness. Salaries of Engineers in State employment, Chairman Kohli, was absent but Chacey reported having a copy of a questionnaire which was sent to all 48 state concerning salaries. Chairman Salsinger of the committee of Deed Descriptions read his report (a digest of the report will appear in the May issue of the Ohio Engineer).

"Engineer Nold, Prexy of N.S.P.E., was present and in the absence of the National Director stated some interesting facts concerning the National Society. President Nold visited Houston, Texas, in January, recently assisted in the installation of the new State Society of Georgia and plans to help install the new State Society of Wisconsin on May 26. President Nold has dates with the Toledo, Dayton and Akron Chapters. Nold pointed out the need for more funds in the National Society, stated that the anticipated membership is 8000 in 1944 and recommended increasing the N.S.P.E. dues by $2.

"Executive Secretary Chacey's report to the Trustees included an interesting letter of how one member had met with difficulty getting transferred from one chapter to another. Chacey reported that Zanesville had raised the question of keeping licensed engineers who are out of contact with the Board of Registration, in good standing. His answer was that their names would appear in the back of the roster with address unknown but they would not lose their license.

"R. N. Waid and Frank Shelton, two of the three Licensed Engineers appointed by the Governor on the Highway Recodification Commission, both members of the Ohio Society, were present by special request to tell the Trustees of the activities of the commission as might affect the Profession. Amended State Bill No. 99, which created the commission of 9 members, was sponsored by the Ohio Good Roads Federation. The members, 3 from the House, 3 from the Senate and the 3 appointed by the Governor, serve without pay, except expenses. The rumor that the Commission might recommend the appointment of County Engineers by the County Commission has no foundation in fact said Engineer Waid. It was pointed out by Waid that some change in the distribution of tax money was needed. Engineer Shelton, who is an attorney also, is on a subcommittee dealing with the rewriting of the laws and he recommended that all suggestions be presented to the Commission in writing.

"Under the item of new business President Rolph presented the question of Post War Planning which had been discussed in the Executive meeting. After considerable expression in favor

of the Society doing all it could to encourage Chapters to promote and encourage Post War Planning in their own community a motion to create a committee for that purpose was passed."

President's April Letter

"Fellow Engineer:

"April has started with a fine meeting of the Board of Trustees on the 7th—good attendance, much discussion, great interest in the many activities of the Society.

"Governor Bricker recognizes the value of professional standing for engineers. His three appointments to the Highway Recodification Commission are all registered professional engineers.

"The Society is on record in favor of planning now for needed public improvements of a sound financial character, which can be economically executed when the war ends. Post-war planning is receiving much attention from Federal, State and Municipal officials and engineers and from civic bodies of all kinds. It is obvious that no time or energy should be subtracted from the war effort. But the transition from war to peace will not be simple or easy and the public will be greatly benefitted if sound plans can be ready to take up some of the slack in military and industrial activity. Here is a place for the professional engineer to serve the public and assume a new position of importance and dignity in his community. Some of our Chapters already have a Post-War Planning Committee which is cooperating and assisting in the local planning activity. It is desirable for all Chapters to create such committees. A committee of the State Society has been authorized to advise and assist the Chapter committees. It will be appointed promptly.

"O.S.P.E. membership continues to grow in 1944. New Members are coming in at the rate of 50 a month. Congratulations to all the Membership Committees. Professional consciousness is growing, especially among engineers in industry. "Engineering is one of the great activities of man. We can all of us be proud of our professional standing in that activity."

Sincerely yours,
Tom Rolph

Chapter Activities

(From the Ohio Engineer)

Canton Regional — Secretary Sperow sent along a copy of a letter announcing the March meeting. The letter was interesting and showed that the Secretary was doing his part well.

Cincinnati—Publicity Committeeman John L. Andrews reported that John C. Black, editor of the Spanish language edition of Roads and Streets, discussed the Central American section of the Pan-American Highway. His discussion was illustrated by color movies taken on his inspection tour. A few pictures of the new volcano, Paracutin, were shown. Secretary LeFeber's minutes of the meeting stated that there was an attendance of 61 and gave many interesting features of the discussion. (Sure sounds like a good program for others to inquire about.)

Cleveland — The Cleveland Engineer shows the value of a Chapter publication in reporting their Fnancial Balance sheet for the year, the standing committees, a convention report to the members, personals and other items of interest to keep the membership well informed of the Chapter's activities.

Dayton — A postcard was received announcing a meeting to be held. Ben East, Outdoor editor of the Grand Rapids Press, was to illustrated "Pathway for Invasion" in the Aleutians with Colored movies.

Franklin County — The Columbus Engineer announced a meeting in March and one in April on Post War Planning. Mr. Smith told at the March meeting how the American Institute of Architects has been doing extensive committee work on Post War Planning. The usual President's message was in the April issue along with the nominations for their June election and other items of interest.

Mahoning Valley — Secretary Stoll reports that 49 attended their March meeting. Post War Planning for Foreign Trade was the subject of Professor Donaldson from Case School of Applied Science. The speaker was humorous and interesting. The usual business was conducted after the speaker finished. (Sounds like a good procedure at all times.)

Marion — Secretary Taylor's announcement for their April meeting was interesting and announced it as guest night. No doubt we will have a report on the meeting later.

Muskingum — We lost track of who sent us an 8-inch newspaper article headed "Chemical Engineer say Sulfa Drugs produced here are best in the world" clipped from the Marietta Times. The speaker was Fritz Robitschek, Chief Chemist in the control laboratory of the Marietta Dyestuffs Company, Marietta Ohio.

North Central— An imposing poster announcing the March 20 meeting in Mansfield was received from Public Relations Committeeman Robert C. Monnett. N.S.P.E. Director Kennedy was to speak on Professional Ethics and N.S.P.E. President Nold was to speak on Collective Bargaining.

Springfield District — Secretary Steiniger reports that the March meeting found their own President Muffly speaking on Post War Products Planning. He touched on such subjects as automobiles, aircraft, refrigeration, etc. (Sounds like a likely program for neighboring chapters.)

Toledo — Secretary Hallauer's card announced a March meeting with W. H. Spindler, editor of the Highway Magazine, as the speaker. Mr. Spindler was to show colored slides he took on the Alcan Highway.

Zanesville — Secretary Painter's minutes of their last meeting go into detail to tell of an interesting talk on Post War Planning by Mr. Larry Hess, secretary of the Zanesville Chamber of Commerce. Many other items of interest were mentioned in the minutes.

Chapter Transfers

Practice in Ohio Submitted For Information

"When a member of Chapter A moves into the territory of Chapter B he frequently loses those personal contacts so necessary to his continued interest in the professional movement. Chapter Secretaries do their best to keep their records straight and follow the rules. To assist in this matter perhaps it would be well if all the membership understood the new policies recently outlined to the Secretaries in the matter of transfers.

1. Any member moving from Chapter A to Chapter B is a member of the Ohio Society and the National Society and of course retains that membership. In addition he should automatically become a member of Chapter B without any adjustment in Chapter dues. It goes without saying that we join the Society through the Chapter where we reside. Therefore when our residence changes our chapter affiliations should change.
2. Although this transfer should be sponsored and recommended as a matter of courtesy by the Secretary of Chapter A it is not necessary to the transfer.
3. The Secretary of Chapter B, however, must send the transfer to the Ohio Society office on the regular transmittal sheet stating the name of Chapter A in order to keep the records straight.
4. In order to assist in this matter the State Society office will notify the Secretary of Chapter B when there is a change of address of any member from Chapter A. The O.S.P.E. office will not, however, officially make any transfer until the Secretary of Chapter B has contacted the new member and has gained his consent to make the transfer by sending his name in on a regular transmittal sheet as a transfer from Chapter A.
5. The O.S.P.E. office will also take on the obligation of notifying Chapter A of the transfer."

OKLAHOMA

Charles S. Larkey — New President

The demands of war have interposed to compel the resignation of William G. Fuller as President and to prevent the succession of Dudley H. Jones, 1st Vice-President. Vice-President Charles S. Larkey has been called upon to assume the helm of the Society

Correspondence relevant to the change of officers is printed herewith

Engineer Charles S. Larkey March 15, 1944
Second Vice-President
Oklahoma Society of Professional Engineers
308 *Sinclair Building*
Tulsa, Oklahoma

Dear Engineer Larkey:

This will confirm our conversation relative to the necessity for my resigning as President of the Oklahoma Society of Professional Engineers. At the time of the election at the Tulsa convention, my work was of such nature that I felt I could give sufficient time to the work as President of the Society to permit the organization to continue to progress. However, as you know, I am being transferred from Tulsa to Dallas, Texas, on war work of importance. It is, therefore, necessary for me to resign this office so that the new President can take over with the least possible loss of motion. Engineer Dudley Jones, First Vice-President, was contacted on the matter, but due to the war work in which he is engaged at this itme, he was unable to accept the office as President, and therefore you, as Second Vice-President, will become my successor.

All standing and special committee appointments have been made and District chairmen have been appointed, but some have not completed the selection of the District committees.

Copies of this letter are being sent to all members of the Board to advise them of my resignation as President and of the transmittal of all files to you.

This action has not been taken without a great deal of thought on my part, but I know that the affairs of the organization will be better handled by reason of this action.

Very truly yours,
M. G. Fuller
President

Engineer Edward Larson March 31, 1944
Executive Secretary
National Society of Professional Engineers
National Press Building
Washington, D. C.

Dear Engineer Larson:

I am enclosing carbon copies of letters received by the Publicity committee which explains that due to war work and transfers, both our President, M. F. Fuller and First Vice-President, Dudley Jones have been forced to resign and 2nd. Vice-President, Engineer C. S. Larkey is now acting President and will become President at the first meeting of the Board of Directors.

I am also including the 1944 Roster with present committees as appointed stapled to the back of these Rosters, and list of Oklahoma Registered Engineers roll call in the U. S. Armed Forces. I am sending a carbon copy of this letter, Larkey's letter, Fuller's letter and 1944 Roster to Arthur V. Sheridan, Editor of the American Engineer.

I am also including in your letter only copy of the Publicity committee's report for 1943 and clippings from Oklahoma newspapers.

Yours very truly,
Engr. Wm. (Bill) Ritzhaupt
Chairman—Publicity Committee
Oklahoma Society of Professional Engineers

Mr. Wm. Ritzhaupt March 23, 1944
100 *W. Broadway*
Britton, Oklahoma

Dear Engr. Ritzhaupt:

With the resignation of Engineer Wm. G. Fuller, as President, and of Dudley H. Jones as First Vice-President of the Oklahoma Society of Professional Engineers, the duties of chief executive seemed to have fallen upon my shoulders.

Inasmuch as the membership should be advised of this change as soon as possible, you may wish to give the Oklahoma City papers a report for publication. The Tulsa papers have already been notified.

I shall endeavor to keep you informed from time to time of any developments that are in line with your committee's activities.

Very truly yours,
Chas S. Larkey, President

1944 Roster

The latest roster of the Oklahoma Society of Professional Engineers has just come to hand.

In addition to the roster of members there are listed the officers, directors and committees of the Society. A foreword outlines the aims of the Society and advises that 75% of all registered engineers are members.

Board of Directors

Terms expiring January, 1945
W. S. Sherman, G. G. Toler, M. G. Fuller, Paul Laws, A. O. Walker

Terms expiring January, 1946
N. E. Wolford, G. H. James, R. Lindsay, H. G. Thuesen, H. E. Bailey

Terms expiring January, 1947
C. S. Larkey, W. R. Grace, T. O'Dell, D. E. Powell, M. B. Cunningham

Terms expiring January, 1948
T. P. Clonts, A. H. Riney, C. H. Guernsey, J. P. Crane, J. F. Brooks

Terms expiring January, 1949
Vic H Cochrane, Glenver McConnell, B. E. Clark
C. A. Stoldt, Ralph Lee, Sr.

Officers for 1944

C. S. Larkey, President
M. B. Cunningham, Secretary
J. M. Gayle, Asst. Secretary
D. E. Fields, Treasurer
A. O. Walker, National Director
V. J. Bodovitz, Attorney

Standing Committees

Ethics and Professional Practice
C. H. Guernsey, Chairman, Okla. City
H. J. Dorcey, Okla. City
Wyatt B. Hendrick, Lawton
Dudley H. Jones, Okla. City
Victor Cochrane, Tulsa

Enforcement
L. L. Dresser, Chairman, Tulsa
Rex Collins, McAlester
Stanley Learned, Bartlesville
W. H. Sindt, Ft. Worth, Texas
David E. Fields, Tulsa

Legislation
E. K. Ransey, Chairman, Okla. City
T. P. Clonts, Vinita
Walter Wheatley, Okmulgee
E. C. Baker, Stillwater
Nelson Turner, Okla. City

Publicity
Wm. Ritzhaupt, Chairman, Britton
Ralph Lee, Sr., Okla. City
Brice Patrick, Muskogee
W. R. Wooten, Tulsa
Gwynne B. Hill, Okla. City

Meetings
Cecil Perkins, Chairman, Okla. City
Clark A. Dunn, Stillwater
R. F. Danner, Okla. City
David E. Fields, Tulsa
James B. Davis, Tulsa

Membership
William Hall, Chairman Stillwater
Carl R. Stevens, Tulsa
D. I. McCullough, Okla. City

Special Committees

Committee on Affiliation with National Society of Professional Engineers

A. O. Walker, Chairman, Muskogee
William R. Wolfe, Muskogee
W. R. Wooten, Tulsa

Committee for Investigation and Report on Plan for employing Full Time Secretary

A. O. Walker, Chairman, Muskogee
Charles S. Larkey, Vice-Chairman, Tulsa
Allan Craig, Tulsa
Gwynne B. Hill, Okla. City
H. C. Theussen, Stillwater

District Committees

District No. 1
J. C. Gabbard, Chairman, Stigler
Rex Collins, McAlester
Paul L. Laws, Talihina
Thomas O'Dell, Antlers
Varner L. Stinson, Durant
A. W. Schneider, McAlester

District No. 2
L. T. Matson, Chairman (not appointed)

District No. 3
Ross Taylor, Chairman (not appointed)

District No. 4
Vivian Williamson, Chairman, Enid
Curtis B. Day, Blackwell
S. E. Ewing, Guthrie
Paul L. Farrington, Stillwater
Ed. R. Hapley, Stillwater
H. H. Hunt, Perry
Waldo M. Porr, Enid

District No. 5, 6, 7, and 8
Chairmen have not selected their committees.

District No. 9
Allan Craig, Chairman, Tulsa
Russell W. Hall, Tulsa
Gordon Lowe, Tulsa
C. S. Simon, Tulsa
J. E. Scanze, Tulsa
N. P. Whaley, Jr., Tulsa
E. N. Wood, Tulsa
W. R. Wooten, Tulsa

District No. 10
John Simonson, Chairman (Committee has not been selected)

In Service

Lt. Ferdnand W. Arnold, Okla. City, USN SB
Capt. James B. Bennepp, Tulsa, USA
Lt. Norman Leonard Byrd, Okla. City, USA
Lt. jg Robt. M. Brooks, Muskogee, USN SB
Capt. Stansel Byers, Ardmore, USA
1st Lt. Flavius L. Barrett, Claremore, Army Air corps, Box 184, Dalhart, Texas
Lt. jg Leo Best, Poteau, Alaska Aleutians & Kiska, SB
Capt. S. K. Bean, Okla. City, USA
W. B. Birdseye, Okla. City, USN
Major Morris C. Burke, Okla. City, USA
W. A. Beck, Tulsa, Warrant Officer, Sea Bees
Capt. James Leroy Berry, Altus, USA
Major H. D. Brown, Stillwater, USA
Homer C. Ball, Wichita, US Air Corps
Robert O. Bradley, Army Engrs. Corps
Lt. jg J. Clifford Brown, Blackwell, USN
1st Lt. F. A. Deeker, Pawhuska, USA
Lloyd W. Cowan, Shawnee, Box 120, USA
Julius A. Canahl, Okla. City
1st Lt. Floyd R. Cowan, Okla. City
Lt. jg John Carney, Stigler, Okla.
Capt. Lewis L. Dickerson, Okla. City, USR
Col. Philip S. Donnell, Stillwater, USA
Ronald B. Decker, Chickasha, 31 USN SB Davisville, RT 1
Capt. Paul E. DeBous, Okla. City, Air Corps
Benj. M. Danford, 2nd Camp Gr
Capt. David H. Foster, Tulsa, 8th USA Air Force
Lt. Col. Wm. Earl Garrison, Fairview, 738th FA Bn Fort ORD Calif.
Capt. Doyle Grace, Tulsa, 8th USA Serc Comm
Geo. L. Gillian, Chandler
Mark H. Hargis, Okla. City, Army Air Corps
Lt. William B. Hayes, Jr., Muskogee, Navy Fed. Bldg., Los Angeles, Calif.
Capt. Paul C. Henderson, Okla. City, USA Engrs.
Commd'r Otis Howard, Okla. City, USN
John L. Huston, Okla. City, USA
Lt. Geo. D. Kester, Okla. City, USA Engrs.
Capt. Robt. Francis Long, Okla. City, USA
CPO Vernon L. Lowe, Waggoner, Ch. Petty Off. USN
Lt. Commd'r John S. Lyles, Waggoner, USN SB
Hunter McPheters, Stillwater, Ensign
Lt. Co. Albertis Montgomery, Okla. City, USA Engrs.
Lt. Geo. D. Michael, Perry, Okla., USN SB
Geo. W. Mitchell, Purcell, Okla., Ft. Leonard Wood, USA
Lt. Commd'r Frank C. Morris, Norman, USN
Charles A. Newberry, Okla. City, US CPO SB
John G. Manners, El Reno, USA
Major Jerry A. Nolen, Seminole, UD Ordnance Aberdeen
Lt. Floyd Oakley, Ripley, US Marines
Capt. C. E. Perkins, Bartlesville, 8th Bn Camp Reynolds, Penn.
Lt. jg James D. Piper, Stillwater, 61st USN Constr. Bn.
Capt. H. R. Pretty, Okla. City, Quartermasters Depot, Oakland, Calif.
Capt. Dwight Powell, Frederick, Box 458, San Angelo, Tex. Army Airfield
C. H. Palmer, Ft. Worth, USA Ensign
Lt. Col. Paul J. Phillips, Stillwater, USA
Major Leroy S. Scott, Okla. City, USA
1st Lt. John Bruce Stout, Sgl. Corps, Monmouth NS USA
Major Guy S. Short, Lewisville, Ark.
Lt. Col. W. Claude Sale, Okla. City, USA Engrs.
Geo. Styles, Enid, Oklahoma
Lt. James Stokes, USA Air Corps, Woodward
1st Lt. Jim S. Thompson, Okla. City, USA Engrs.
Major Leo H. Towers, Tulsa, USA
Capt. Fred L. Verity, Okla. City, USA
Glenn Voegelein, El Reno, Okla.
Lt. Col. Rollo E. Venn, Stillwater, CA
Lt. Virgil A. Wallace, Hobart, USN SB
Lt. jg Donald J. Woolsey, Tulsa, USN, Scotland
Major S. B. Wadley, Okla. City, USA
Lt. E. C. Wackentin, Okla. City, USN
Major Murray Womble, Tulsa, US Engrs.
Commd'r Judge Waldrep, USN
Commd'r Geo. W. Whiteside, USN
Geo. Whittenburg, Stillwater, USA
1st Lt. J. M. York, Jr., Claremore, Army Corps, 2420 Ave. Q Waldorf Apt. 14, Galveston, Texas

PENNSYLVANIA

Society Collaboration With Industry

Chairman Nesbitt of the Committee to Cooperate with Industry has forwarded to the members of his committee an outline of the purposes and procedure by which the committee can best function during this year to attain the results for which the committee was formed.

Ask one of the members of the committee, who is a member of your Chapter, to read Chairman Nesbitt's memorandum of March 23, 1944, at your next meeting. You will be interested. The following are members of the committee:

Albert J. Nesbitt, President—John J. Nesbitt, Inc.—Philadelphia
Ivor V. Jones, Chief Engr.—The Barrett Company—Philadelphia
H. A. Simpson, Partner—Machine & Tool Designing Co.—Phila.
J. H. Vickroy, Mining Engr.—Carnegie-Ill. Steel Co.—Johnstown
Wm. C. Frank, Chief Engr.—Bethlehem Steel Co.—Johnstown
J. H. Morrow, V-Pres. & Chief Engr.—Fuller Co.—Lehigh Valley
S. G. Reque, Chief Engr.—Pa. Pwr. & Light Co.—Lehigh Valley
C. E. Lehr, Chief Engr.—Plant Div. Bethlehem Stl.—Lehigh Valley
J. A. Gish, Jr., Supt.—Lehigh Portland Cement Co.—Lehigh Valley
G. R. Throop, Chief Engr.—United Engr. & Fdry. Co.—Midwest.
Henry H. Otto, Chief Engr.—Hudson Coal Co.—Northeast
K. H. Caskey, Chief Engr.—Harrisburg Steel Corp.—Harrisburg
A. B. Snavely, Chief Engr.—Hershey Choc. Corp.—Harrisburg
P. Talbot, Engr.—Penna. State Park & Harbor Commission—Erie
Earl S. Fenelon, Chief Engr.—H. J. Heinz Co.—Pittsburgh
Ragner Berg, Chief Engr.—Koppers Construction Co.—Pittsburgh
F. R. Hecht, P'gh Dist. Mgr.—B. F. Sturtevant Co.—Pittsburgh
A. S. Wertz, President—Wertz Engineering Co.—Reading

Comments By Secretary

They tell us this is an engineer's war. Why? Because we plan and design the engines of war? Because we engineer the production of these engines? Because the engineers are in the advance forces of every action? Possibly so, but perhaps it is because the engineer is being kicked around more than any other profession and is making a greater financial sacrifice.

The M.D. and dentist in practice are coining money and in service they are, in general, safe behind the lines, The lawyers and accountants are the bureaucrats, commissioners and authority representatives who act as judge and jury in Washington. But the engineer—well, he is the fellow who builds the bridge under fire so the infantry and the guns can advance and at home he is the responsible trained personnel who works Sundays without

pay supervising engineering projects on which labor gets paid double.

We are not attempting to detract from the prestige and advantages enjoyed by these professions, as we all know our battle wounded need the best of medical care, (we could do without the services of those legal minded gentlemen who thought up this last income tax statement) but rather to emphasize the distinction the general public has made between the professions and the difference in their remuneration at home.

The M.D. makes his money from the public when they are sick or in pain. The lawyer from persons who are in trouble with our laws. The engineer makes his little by trying to prevent sickness and accidents to the public. They have forgotten "An ounce of prevention is worth a pound of cure." The M.D.'s and the lawyers get the pound and the engineers the ounce.

What can we do about this situation? We can start with industry and our local and State Governments. Make them realize the services of the Professional Engineer in their organization is worthy of better remuneration and respect than he is receiving at present to enable him to raise his standard of living free from petty worries and in this way increase his efficiency and value to the corporation or public office he serves.

How can we go about this? We have a committee set up to cooperate with industry but they cannot do the work alone. It will require the cooperation of all of us. Our enthusiasm and dogged determination to accomplish the desired results. In my opinion, general publicity should be followed by personal contacts. What do they know about us anyway? To them we are just another engineering society. They have got along in the past without our help, why shouldn't they in the future? Perhaps they will, however, competition, I believe, will become keener than industry has ever known. Industry will need all the resourcefulness and technical knowledge that engineers possess to enable them to compete in domestic and world markets with raw materials and manufactured goods from other countries having low labor rates and lower standards of living. In addition, this country has never been as union minded as it is today, nor have the unions been as strong. They will fight to the last ditch to preserve their wage levels and hours. Yes, industry is going to need us after the war. Today on the field of battle, tomorrow on the industrial battlefields of the world. *Russell S. Conrad*

State Committee Notes

The following have been excerpted from the recent Society Report.

Executive

"It was emphasized that this year was an opportune time to promote the Society among the faculty members of engineering schools in Pennsylvania, having as President, Hale Sutherland, an educator. A letter campaign was suggested to be followed with an invitation to faculty members to be present at the time of the President's visit to the various Chapters in proximity to the engineering schools.

A suggestion that the Executive Committee meet with the Registration Board and exchange ideas and it was decided to request Chairman Richardson to name a time and place for such a meeting when members of both could sit down and discuss informally ideas which would be of mutual benefit.

Realizing that most Chapter Meetings are not what they should be, it was decided to circularize all Chapters, secure recommendations to promote Chapter meeting attendance and interest, and distribute the replies to the Chapters for their attention."

Legislative

"The Committee has received approval of the 15 Points by the Pittsburgh, Erie, Philadelphia and Lehigh Valley Chapters; the Lehigh Valley Chapter making a recommendation on Point No. 8. Chairman Craig recommended that as soon as this year's committee is appointed an attorney should be selected and the writing of the act started."

Public Relations

"Chairman Paine reported as follows:

1. In its ten years of existence, the National Society has had a steady, continuous growth and indications are that it will continue. Undoubtedly, the Society's growth will depend upon its ability to uphold the ideals of the engineering profession and the service it renders to the members.

2. Statistics on National Society.

3. Philosophy of individualism, professionalism and collectivism.

4. A large part of the engineering profession belongs to the so-called 'white-collar' employee class and it is for these members the Society must find an answer.

This does not include the professional engineer in private practice, engineers having managerial responsibilities, or engineers who are immune from unionization.

5. The Professional Engineer Employee.

6. Section 7 of the National Labor Relations Act guarantees to employees the right 'to self-organization, to form, join, or assist labor organizations, to bargain collectively through representatives of their own choosing, and to engage in concerted activities for the purpose of collective bargaining or other mutual aid to protection.'

If Section 7 were not limited by other sections of the law, the National Society of Professional Engineers, their State Societies, the local Chapters could act as collective bargaining agencies for their members. However, this cannot be done as Sections 8 and 9 prevent this.

Section 8(1) of the Act makes it illegal for an employer to interfere with, restrain, or coerce employees in the exercise of rights guaranteed in Section 7

Section 8 (2) makes it illegal for an employer to dominate or interfere with the formation or administration of any labor organization or contribute financial or other support to it

7. The membership of the Professional Engineers' Society embraces both employers and employees. Thus the very nature of its membership makes it impossible for the Society or any of its local Chapters to act as a union or collective bargaining agency for its members

8. There is nothing in the National Labor Relations Act that shows there was any intent to unionize the professional groups, but time has demonstrated how laws may be interpreted when government is administered by directive and decree. In fact, bona fide professional employees are exempted from the National Labor Relations Act by the Fair Labor Standards Act.

9. But please note carefully; the Administrator of the Wage and Hour Division under the Fair Labor Standards Act has set up a definition for the 'bona fide professional employee' and unless you can qualify under this definition which is the law, you are just a skilled laborer and not a professional."

Officers And Committees—1944

Executive Board.

Hale Sutherland, Lehigh Univ., Bethlehem, Pres. & Nat. Director
J. J. Paine, 1430 N. Euclid Ave., Pittsburgh 6, Vice-President
R. V. Hudson, 115 Sanger St., Philadelphia 24, Vice-President
Samuel Baker, 1517 Quincy Ave., Scranton 9, Vice-President
R. Lawrie, Jr., 110 Shamokin St., Harrisburg, Vice-President
R. S. Conrad, 29 S. 3rd St., Harrisburg, Executive Secretary
Walter E. Witte, 5106 N. Carlisle St., Philadelphia, Treasurer
A. A. Townsend, 718 Carpenter Lane, Philadelphia 19 Asst. Treas.
R. H. Craig, 222 N. 3rd St., Harrisburg, National Director
George H. Winkler, 353 W. 10th St., Erie, Director, Erie Chapter
Victor J. Synder, 2400 N. 2nd St., Harrisburg, Director, Harrisburg
Lewis R. Owen, 307 Bedford St., Johnstown, Director, Johnstown
V. W. Anckaitis, 1929 Ferry St., Easton, Director, Lehigh Valley
Wm. S. McFetridge, 10 N. Main St., Greenville, Director, Midwest.
J. R. McCormick, 348 N. Sumner Ave., Scranton, Director N'east
L. E. Moody, 1500 Walnut St., Philadelphia 2, Director, Phila.
J. R. Shoffner, Keystone Bldg., Kittanning, Director, Pittsburgh
LeRoy F. Christman, 101 Endlich Ave., Mt. Penn, Reading, Director, Reading

Executive Committee

Hale Sutherland, Chairman, Lehigh University, Bethlehem
Russell S. Conrad—29 S. 3rd St., Harrisburg
Robert V. Hudson—1115 Sanger St., Philadelphia 24
J. J. Paine—1430 N. Euclid Ave., Pittsburgh 6
Samuel Baker—1517 Quincy Ave., Scranton 9

Ritchie Lawrie, Jr.—110 Shamokin St., Harrisburg
Robert Hall Craig—222 N. 3rd St., Harrisburg

Ethics & Practice Committee

Louis T. Klauder—Chairman—Lincoln-Liberty Bldg., Phila. 7
G. Arthur Danielson—14 W. 8th St., Erie
George B. Baines, 3rd—3112 Green St., Harrisburg
Philip J. Hoffman, 107 Lucetta St., Johnstown
Harry G. Payrow—1431 Lenox Ave., Bethlehem
James Claude Aiken—707 N. McKean St., Butler
Samuel Baker—1517 Quincy Ave., Scranton
Bennett T. Gordon—205 Elysian St., Pittsburgh
Edgar D. Sibley—412 Washington St., Reading

Legislative Committee

Wm. A. Hemphill—Chm.—620 Packard Bldg., 15th & Chestnut Sts., Philadelphia
Samuel I. Sacks—921 Widener Building—Philadelphia 7
John R. Shoffner—Keystone Building, Kittanning
Charles A. Finley—1507 Law & Finance Building, Pittsburgh
Robert Hall Craig—222 N. 3rd St., Harrisburg
William P. Johnson, 821 Commerce Building, Erie
Alvin M. Berkey—1503 Grove Ave., Windber
Joseph B. Gaffney—124 Bridge St., Catasauqua
H. T. Osburn—Trust Company Building, Franklin
Henry H. Otto—1805 Vine St., Scranton 10
Albert C. Wood—1203 Stock Exchange Building, Philadelphia 2
Allen W. Reid—412 Washington St., Reading

State Committees

Public Relations Committee

J. J. Paine, Chairman—1430 N. Euclid Ave., Pittsburgh 6
Albert K. Hubbard—639 W. 8th St., Erie
Ritchie Lawrie, Jr.—110 Shamokin St., Harrisburg
James L. Daley—City Hall, Johnstown
Huntington Todd Carter—P.O. Box 305, Stroudsburg
E. H. Edwards—P.O. Box 91, Scranton
John Eaton South—6 Barley Cone Lane, Rosemont
F. G. Ross—309 Fourth Ave., Pittsburgh 22
James E. Mast—524 Court St., Reading

Membership Committee

LeRoy F. Christman—Chairman—101 Endlich Ave., Mt. Penn, Reading
Fred W. Talbot—1673 W. 11th St., Erie
Irvin H. Geiger—P.O. Box 83, Harrisburg
S. E. Dickey—809 Johnstown Trust Building, Johnstown
Henry A. Stoess, Jr.—2205 Liberty St., Allentown
William S. McFetridge—10 N. Main St., Greenville
George H. Wilson—645 N. Bromley Ave., Scranton
Thomas F. Kerney—4524 N. Reese St., Philadelphia
J. W. Brown—1226 Oliver Building, Pittsburgh
George A. Roos—200 Mahantongo St., Pottsville

Chapter Committee

Russell S. Conrad—Chairman—29 S. 3rd St., Harrisburg
Samuel Baker—1517 Quincy Ave., Scranton
J. J. Paine—1430 N. Euclid Ave., Pittsburgh 6

Publication Committee

John E. South—Chairman—6 Barley Cone Lane, Rosemont
W. H. Hinks—1004 Johnstown Trust Building, Johnstown
Francis A. Heine—Bureau of Water, City Hall, Reading

Nominating Committee

J. Rossa McCormick—Chairman—348 N. Sumner Ave., Scranton 4
George H. Winkler—353 W. 10th St., Erie
Victor J. Snyder—2400 N. 2nd St., Harrisburg
Lewis R. Owen—307 Bedford St., Johnstown
William S. McFetridge—10 N. Main St., Greenville
Victor W. Anckaitis—1929 Ferry St., Easton
L. E. Moody—1500 Walnut St., Philadelphia 2
John R. Shoffner—Keystone Building, Kittanning
LeRoy F. Christman—101 Endlich Ave., Mt. Penn, Reading

Audit Committee

Warren K. Myers—Chairman—309 N. 29th St., Camp Hill
Guy R. Johnson—2347 N. 2nd St., Harrisburg
Edgar T. Clapp—2417 N. 2nd St., Harrisburg

Civilian Defense Committee

John M. Moltz—Chairman—1959 Chestnut St., Harrisburg
Clarence K. Pulling—Dept. of Engineering, City Hall, Erie
C. Frank Class—18th & Mulberry Sts., Harrisburg
Fred W. Claflin—606 Swank Building, Johnstown
William N. Smith—524 Court St., Reading
William S. Wagner—4626 Oakland St., Philadelphia

RHODE ISLAND

Plans Membership Drive

The Rhode Island Society under the able leadership of President Ise has an energetic program planned for 1944. Interesting meetings with outstanding speakers and a well planned drive to augment membership are being pointed up by the Executive Board which is composed of the following:

President, Henry Ise; Vice Presidents, Richard A. Phelan, James J. McIntyre; Treasurer, Joseph Wuraftic; Secretary, Charles E. Blais; National Director, Charles W. Steward; Directors, William J. Harlow, Rolf E. Soderback, Leon L. Holland, John V. Kelly, Harry W. Bernstrom, C. Robert Lynch; Past Presidents, George J. Geisser, Daniel O. Cargill.

RICHARD A. PHELAN
1st Vice Pres.

JAMES J. McINTYRE
2nd Vice Pres.

HENRY ISE
President

CHARLES E. BLAIS
Secretary

JOSEPH WURAFTIC
Treasurer

Possessed of a young and energetic set of officers the Society is justified in anticipating achievements before the end of 1944.

Technical Advisory Service

(*Continued from Page* 6)

and during the post-war period and if such a service to Congress as outlined in the foregoing seems desirable, then it should be authorized and organized on a permanent basis at the earliest possible date.

Anent the above proposal there is published herewith a pertinent communication written by the author in response to a request from the Truman Senate Committee:

"March 1, 1944

Mr. Matthew Connelly, Chief Investigator
Truman Committee
Room 160
Senate Office Building
Washington, D. C.

Dear Sir:

In accordance with your request that I discuss the effect of the Smaller War Plants Corporation on Engineers I wish to submit the following:

The Principal reason that Government Purchasing Agents prefer to deal with large corporations is that these corporations without exception have competent engineering staffs that are at the beck and call of the Contract Officer whenever difficulties are encountered.

Small plants are not so fortunately situated as they buy their engineering services piecemeal so to speak and naturally have no cohesive engineering staff to offer the Contracting Officer.

A strong Prime Contract Division in the Smaller War Plants Corporation clothed with full powers in the premises will make it possible to use the 'Mother Hen' principle wherein a group is set up to perform the necessary engineering and management functions for a large assembly of small plants. This group would furnish all the services both to the small plants and the Contract Officers of the Government that engineering and management staff members of large corporations furnish in their respective field and would put the small plants on the same basis as the larger plants.

As immediate Past President of the National Society of Professional Engineers, I am interested for the simple reason that such a program will necessitate the formation of many groups of engineers throughout the country to perform these duties and will therefore help both the small plants and the engineers whose interest in this case are identical.

The small plants will benefit in that they will for the first time have at their disposal a full time engineering staff competent to advise them on production methods and procedures that (except for volume in an individual plant) will put them in the same position as the larger plants.

It is imperative that such action be taken immediately by the Smaller War Plants Corporation if the small plants are to be saved. It will be National Suicide if they are not.

In order to accomplish this it is imperative that the entire Board of Directors be sympathetic with the program as expressed by the Congress and that the Staff be competent and unafraid of the magnitude of the problem.

The entire directive personnel should be competent registered professional engineers and should be empowered by the Board with full power to act within their several spheres. If this is done there is no reason why the plan cannot be successful.

However, it would be a much better plan to divorce the Smaller War Plants Corporation entirely from the War Production Board and remove from Smaller War Plants Corporation all personnel that have previously been members of the War Production Board Staff. This action would free the Board and the operating personnel from all restrictions under which they are now operating.

I trust that these views may be of some assistance to you.

Sincerely yours,
Walter L. Simpson

What Do You Think

(*Continued from Page* 9)

ability and scientific attainments of the Professional Engineer. Truly indicative of this, is a recent court action to prohibit an incompetent individual from practicing engineering in which the judge decided that an Engineer was merely a person well versed in his particular trade. Thus begin the trickles of destruction of a profession as such.

The result is patent. We see disunity through all the ramifications of this greatest of scientific professions, multiplying by fission in the technical schools, evidenced by a multiplicity of overlapping organizations, the title "Engineer" being stultified by misapplication and wrongful appropriation by machine operators and workmen; and, the attempt to draw the Engineer into organizations of labor and thereby curtail his independence of thought and action.

Our pioneering days of rugged individualism are ended and the herd-instinct of our race is being directed now to the formation of classes or groups and domination by paternalistic ideology. Survival of Engineers as a scientific and technical class, capable of self-determination, depends on their individual ability and willingness to think clearly and cogently, to cooperate fully throughout the entire profession, and to spend time and some money in protecting their investment in their chosen profession and their business of engineering. Those given to such research have estimated that the engineer has an investment of about $17,000 in himself at the time he reaches professional status, and the average earning expectancy of a professional engineer is about $65,000, which is quite a business and certainly worth protecting.

In general, engineers who have risen through training and experience to the point where they have obtained a license to practice, are individualists, generally prone to the "rugged" attitude toward fellow engineers and are usually unable to express themselves in any gathering. Being independent thinkers given to research and to "making two blades of grass grow where one grew before", the very human tendency is to create a personal admiration society of Me, Myself, and I, and to hoard up for personal advantage of the "know-how" acquired. Thus, arrived at Professional standing and with a personal capital of experience and recognition, too often the attitude toward others of the profession and more especially toward the sub-professional, is quite concisely expressed by the biblical quotation—"Am I my brother's keeper?" This attitude arises from lack of professional consciousness because natural leaders among engineers do not lead and engineering has come to be regarded as a competitive trade, largely because engineers keep themselves in the background, shy from public contacts, and are loathe to general organization.

Engineering as a profession is facing a crisis and possible disaster at the end of the present global war. The main causes have been stated, and, in the desperate urge of our long-neglected National Defense, expert scientific and engineering grades have been created, appointments made literally by millions without regard to proper qualification and perpetuated to very considerable extent by Civil Service confirmation and status. We also find increasing engineer classifications among the membership of the skilled craft-unions and the formation now of an engineer-union seeking to enroll the professional engineer through better pay and working conditions procured for *its* members under our national labor policy. Many have joined and thus "sold their birthright for a mess of pottage." Our National regimentation under the horde of alphabetical agencies has kept our people so busy making reports, studying restrictions and counting coupons that a saying of Thomas Edison comes forcefully to mind—"About 2% of the people think, another 8% think part of the time, and the other 90% are sheep-minded".

Thorough preparation in the sciences and study of nature's laws has trained the engineer to analyze and reason skilfully, accurately and honestly. These are fundamentals of engineering, but the engineer has neglected the most important study of all, mankind. He *must* concentrate more on vital human problems, coordinate technical with economic and social conditions, weigh developments for their impact on industry and society, and withal, educate

(*Continued on Page* 26)

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The Lawyer And The Engineer

(*Continued from Page* 10)

As for the appraisers of easy virtue and willing prostitution of their training and mental agility to serve the purposes of any employer, I do not believe their professional lives are long or safe. A few encounters with able condemnation lawyers under the fire of precise and thorough cross examination, deflates their fanciful theories of value and leaves the nimble-footed champion hanging on the ropes before judge and jury, and no one even bothers to throw water in his face. No professional reputation can long survive many such encounters.

I do not mean that the expert witness does not take sides. He is on a team and the goal is to make a touchdown with his opinion. All sorts of plays will be devised by the opposition to confuse him, to get adverse commitments from him, which on argument of counsel will be made to seem inconsistent with his opinions. The witness must bear in mind that he is engaged in a fast, rapid play, with forward passes, and runs, spinner plays and the old "hidden ball" plays, before which he must not collapse or retire in shaking timidity or modesty of opinion.

* * * *

I confess I was once impressed by a complaint made by certain expert witnesses that they simply could not make a jury understand the complex and intricate problems discussed. After observing the trial of several thousand condemnation cases my confidence in the jury system is completely reaffirmed. In the overall result, the juries find the simple kernel of truth — so simple that it can be relied upon to puncture and deflate in the overwhelming majority of cases fanciful and extravagant theories of valuation.

If I could digest and summarize the experience of a battery of the ablest condemnation lawyers in the country with whom I am in continuous contact, for they are now on the Government's team, our advice to you as expert witness would be about as follows:

1. Memorize as much data as possible. The facts are your ammunition, and you haven't time on the witness stand to look them up in your voluminous reports and charts.
2. Simplify the subject. Even the most complex matters can be reduced to simple terms and conclusions, resting always on a basis of thorough, detailed, factual analyses and understanding.
3. Answer all questions frankly and truthfully with that self-confidence which accompanies mastery of the subject, and with the constant assurance which is almost invariably correct that you know more about the subject than counsel questioning you.
4. Maintain the attitude of fairness and impartiality, readily admitting the truth even when it seems contrary to your contentions. Such admissions are only damaging if you fail to set them in their proper context so that an isolated fact can be made to throw out of focus the real perspective which the truth demands and which your entire testimony should leave in clear silhouette.
5. Address your answers to the court and jury. Be courteous in your replies, even though firm and resistant at such times as members of my profession may forget themselves and become quite discourteous toward you in an attempt to surprise or stampede you into making an admission or qualification damaging to your true views, and therefore to your client's case. Don't get mad, counsel may be trying to get just that result. Remember that the record is written by a court reporter and your words may shock you the next morning or when they come back to haunt you in the written decision of an appellate court. There you will have no chance to qualify your statements, and the words you left behind on the record may be fatal to your client's contention, and you will be like Hamlet sicklied over with the pale cast of your own thought.

What Do You Think

the public to realize that special training and ability qualify him as most competent to deal with coordinated economic and social problems. Society will accept the professional engineer at his full value to it only when educated to do so by group spirit within the profession itself. Our people cannot be expected to recognize and esteem as a profession any group lacking in cohesion and pride of pursuit.

WHAT'S NEW

And Coming In The Whirl of Change

(News from industry — gathered by the publisher)

THE FUTURE OF DRAWN THERMOPLASTICS

BY W. ELSFELDER
Plastics Moulding Corporation, New York

Will there be a postwar field for the types of formed plastic material which serve as turret domes, pilot enclosures, noses and windows on our bombers and fighters? The answer that I shall try to give to this question is based largely on experience gained by one company in this field, a newcomer, the Plastics Moulding Corporation, of 3835 Ninth Avenue, New York City. It may thus be that in this discussion certain aspects of the subject will be omitted because they have not fallen within the orbit of our own experience.

At the time the United States entered the war, our company's experience was limited to drawing comparatively thin sheets, for fluorescent lighting fixtures, covers and containers. This was a far cry from drawing one-piece turrets weighing from thirty to forty pounds. It took us eighteen months to learn our new job but, since completing that difficult apprenticeship, we have come to the forefront in the production of transparent parts for airplanes at such a rate that it has often left all of us nearly breathless.

Several types of thermoplastic sheet material now exist. Most sheets formed for aviation purposes are of methyl methacrylate, although some cellulose acetate is used. Also susceptible to forming are cellulose acetate, ethyl cellulose, cellulose acetate butyrate, vinyl chloride, cellulose nitrate and to some extent, polystyrene, although further developments in the composition of this latter material and further experimentation in the methods of forming it are required before any great expansion in its utilization can be expected.

All of these materials, as the term thermoplastics suggests, are formed by the means of heat. Hot oil baths can be used but, in a general way, heating is effected by circulating air ovens, which may be heated by steam, electricity or gas. In our own plant, we have large and small open ovens heated by ordinary resistance coils, infrared ovens and indirect gas ovens. The type of the forming will, to a large extent, determine the oven which can best be used. The same is true as to the degree temperature to which the sheet must be heated. Temperature control is an essential part of every oven. Ovens are placed near the presses or forming tools so as to avoid excessive cooling between the time of removal and the actual forming. In some cases, however, a slight degree of cooling before forming is desireable because it hardens the exterior surface of the sheet while the interior still remains pliable and thus reduces possible mark-off. Once heated, the sheets are drawn almost like rubber with a general thinning out of the material.

Several methods of forming are utilized depending to a large extent upon the shape and upon the thickness required at various parts of the drawing. For deep drawn parts, the sheet may be drawn between male and female dies with either one being mobile. As alternatives, a male die may be used with a female ring, compressed air may be used to blow the sheet into a female form or it may be drawn into such a form by means of a vacuum. There is much talk of free-blown parts nowadays. Although such blowing is possible, they are usually vacuum drawn in practice because of the superior control of pressure obtainable in this manner. By means of a number of orifices in the female mold, it is possible to give the irregular shapes to the part being formed with minimum contact. Thus a high type of optical clarity can be obtained.

In the drawing operation the sheet may be held on a rigid frame, or maintained with springs or some other arrangement permitting the material to flow into the draw. It may be manipulated by hand, in which case several operators with special pliers are required to hold and control the flow of a large piece. Presses are usually pneumatic. In addition to deep draws, there are many requirements for pieces having simple curves. Such pieces are formed quite easily, simply being draped while warm over appropriate dies or molds. Large compound curves are often built up by means of a series of simple formed or shallow drawn parts, welded together with ribs of the same material or fitted into frames of metal.

After forming, the parts must be allowed to cool on the form in order to retain their new shape. The formed parts may be easily cut and machined or cemented together by means of a weld that is almost as strong as the material itself. Sheets of methyl methacrylate are already made as large as 5 feet by 7 feet, and up to more than one inch in thickness. By means of cementing and fabricating we have the possibility of building structures much larger than any that have been realized up until the present time.

After this rapid glance at the material and methods used in its fabrication, it

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might be well to take a rapid glance at present applications of drawn thermoplastics before trying to look into the crystal — we might say plastic — ball. Our own early experience, as already mentioned, included the field of lighting fixtures. We have also made headgear for women defense workers, compass housings, covers for fire extinguishers and various types of instruments, spheres for educational and training purposes and various types of novelties, to mention only a few items outside of the field of aviation which at the present time occupies most of our energy.

The Plastics Moulding Corporation has made some of the largest draws ever attempted with this material and engineers all over the country recognizing their ability to do the "impossible" are contacting them for guidance in new postwar uses of drawn plastics.

In the postwar picture, undoubtedly many of these uses will survive; aviation itself will continue to make great demands on drawn thermoplastics. The advantage of having a light transparent material which can follow the streamlines will not disappear with the end of the war. Military planes requiring turrets will undoubtedly greatly decrease in numbers, but pilot enclosures of one type or another will be needed on practically every type of plane, civilian as well as military. Windows, astradomes, radar housings and wing lights will also continue to be needed. The helicopter with a perfect vision nose surrounding the pilot is already a reality.

Much has been said about the plastic automobile. The extent of its realization in the immediate postwar future I shall not attempt to predict, but the practicability and attraction of a light transparent aerodynamic upper section of the body which would give a car all of the vision advantages of a roadster without its inconveniences is quite evident.

Another use which is still largely one of conjecture, is that of housing. Sun walls, sun roofs and bay-windows formed from the material itself may tempt postwar architects. Plastic lighting fixtures of all types, especially for fluorescent and indirect lighting, are already being utilized satisfactorily.

In interior decoration, we have a fertile field with lamps, sculptures and friezes. Very beautiful modern furniture has been designed with the simple, harmonious lines ever possible in this jewel-like material.

Industry will undoubtedly make large use of this type of material. Formed transparent pieces constitute a logical protection to parts of machinery that might cause accidents and yet require surveillance. Instrument covers and spray shields are other possible uses. Engineers already appreciate transparent plastics in model making.

Almost every day we hear of some new application for this type of material. At the present time our company is making humidors for the United States Treasury Department — large refrigerator-like compartments for storing currency and bonds during one stage of the printing operation. The visual control thus obtained may bring about the use of transparent cases for storing valuables in the vaults of financial institutions throughout the country. Oxygen tents and bassinets of transparent plastics are already in use in American hospitals. Transparent plastic floats as navigation markers and lighted buoys are another possibility. Windshields and cabin enclosures on motorboats, display fixtures for perishable, fragile or precious articles, all constitute possible outlets for formed plastics. The unique light-carrying qualities of certain of these plastics suggest their use for various types of signs and displays.

Molded methyl methacrylate lenses are already being used, but lenses of observatory dimension still remain to be realized. It may be that some of the characteristics required of such a lense could not be obtained from plastic, but imagine the advantage for school observatories throughout the country of being able to purchase 50-inch concave mirrors of methyl methacrylate, at less than 1% of the cost of regular lenses. Every high school and college could have its own telescope at a low cost.

In addition to these rapidly sketched uses, there is the enormous novelty field, from costume jewelry, toys and clothing accessories to desk sets and home gadgets.

Thus far plastic manufacturers' postwar possibilities will be limited only by their own adaptability, while for design engineers, these materials open new horizons which they will be quick to explore and extend.

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